II—STUDIES IN SOME STAPHYLINID GENERA OF NORTH AMERICA.

The present opportunity is taken to publish some interesting new species in the family Staphylinidæ. Most museums, public and private accumulate in course of time a considerable number of species that prove to be undescribed, and it seems desirable to make these known, as rapidly as may be convenient, in order that literature shall keep abreast of the increasing collections.

Family STAPHYLINIDÆ.

Subfamily MYLLAENINÆ.

Tribe GYMNUSINI

Gymnusa Grav.

The following is an exceedingly interesting addition to our fauna in this subfamily. It, as well as many other undescribed species, was taken, unfortunately however as a unique, after years of collecting near a small brook, meandering southward across the lane from the ancient house—so far as anything in America may be termed ancient—on the still older family farm of the writer, to the main road through Boston Neck, Rhode Island, this being the local name of a tongue of land extending southward between the Pettaquamscot River and Narragansett Bay, the river having its outlet just above Narragansett Pier:*

Gymnusa grandiceps n. sp.—Form broad and oblong, depressed, the abdomen obtusely acuminate posteriorly; color black, the side margins of the prothorax and the abdomen, apically, pallescent, the legs piceo-testaceous; lustre dull, the anterior parts more shining; head large, about three-fifths as wide as the prothorax, glabrous, convex and polished, the eyes moderate; antennæ very slender and filiform, extending almost

* This region is rather peculiar in its short scrubby vegetation of bayberries, blackberries, huckleberries and profusion of many other shrubs, great variety of small plants within limited areas, very light soil and a prodigious number of boulders left by the receding ice perhaps ten thousand years ago. All the localities cited under the name "Boston Neck," in the descriptions of the writer, refer to this tract of land.

to the elytral apex, blackish, the basal joint testaceous; prothorax two-thirds wider than long, widest behind the middle, the sides broadly and moderately arcuate, converging only apically, the base very broadly, evenly and feebly arcuate, the angles obtuse and blunt, overlapping the elytral humeri within the latter; punctures fine, somewhat sparse, the hairs rather sparse, fuscous; scutellum invisible; elytra transverse, as long and about as wide as the prothorax; sides parallel, feebly arcuate; combined apex broadly and feebly sinuate and also sinuate at each side; surface nearly flat, dull, finely, closely punctate and with very short fuscous hairs; on each there is a large elongate discal impression and another shorter one postero-externally; abdominal segments finely, closely punctured and pubescent, the three basal segments with the usual dense apical comb; lateral margins very thick, abruptly thin on the last three segments; tarsi flavate, very finely filiform, the basal joint of the posterior as long as the entire remainder. Length 4.4 mm.; width 1.6 mm.

This species is hardly comparable, in any way closely, with the European *brevicollis*, or our own smaller derivative of the latter, which I named *atra;* the body is more depressed, the head much larger, the prothorax much less narrowed anteriorly and the tarsi still more slender, among a multitude of other differences.

Subfamily QUEDIINÆ.

As our knowledge of species becomes gradually more and more comprehensive, it is increasingly difficult to define aggregates of species forming subfamilies and tribes in the larger families of the Coleoptera, and the present subfamily is no exception to this general rule. The principal character distinguishing the Quediinæ from the Staphylininæ, for instance, is given in the books as the absence of a double inferior margin at the sides of the pronotum, meaning by this that the hypomera are horizontal or nearly so in the latter subfamily and very much inflexed in the former. This will do very well in such a genus as *Belonuchus*, but there are many Philonthi in which the hypomera are fully as inflexed as in *Quedius lævigatus*, for example. Then there are unmistakable affinities of the Quediinæ with both the Aleocharinæ and Tachyporinæ—through *Tanygnathus*, which is so distinct as to constitute a tribal group in the Quediinæ. So, after all, in delimiting subfamilies and tribes in such cases, more reliance is to be placed upon a combination of many external features, constituting what is known as general habitus, than upon any single structural peculiarity.

The genus *Quedius*, as now understood, is really a supergenus, the

species differing far too much among themselves to warrant their inclusion under a single name, and I would therefore suggest the following subdivisions, based upon North American material. The only difficulty is in estimating the weight or value of these groups and I must confess my inability to come to any decisive conclusion regarding this at present.

Tribe QUEDIINI

Hypomera, or inflexed sides of the pronotum, horizontal.....2
Hypomera strongly inflexed.....4
2—Labrum entire; eyes moderate but prominent; sides of the head throughout closely punctured; infra-ocular carina obsolete; antennæ long, slender and filiform, not incrassate; prothorax subquadrate, the hind angles evident though rounded; scutellum impunctate; elytra with but few punctures arranged in a subsutural and external discal series, the flanks with numerous fine punctures; abdomen evenly and rather closely, not very finely punctate; hind tarsi slender, sparsely pubescent above. [Type *Quedius ferox* Lec.]..**Hemiquedius**
Labrum bilobed; antennæ not filiform; eyes moderate though prominent; prothorax rounded at the sides and base; scutellum impunctate in all known species.....3
3—Front not produced beyond the antennæ; head with only four coarse sublateral punctures, the nuchal constriction deep; elytra with only a few small punctures arranged in about three series on each; abdomen uniformly though sparsely punctate; habits in general subcortical. [Type *Q. lævigatus* Gyll.].....**Quedionuchus**
Front produced medially beyond the line of the antennæ; head with numerous punctures laterally and two on the front discally, arranged transversely somewhat as in *Distichalius* but more widely separated; elytra uniformly but finely and sparsely, the abdomen irregularly, punctate. [Type *Q. puncticeps* Horn].....**Paraquedius**
4—Antennæ filiform; tarsi smooth above, slender; labrum entire but short, with a median canaliculation; body stout, fusiform; head oval, with large but scarcely prominent eyes and very few coarse punctures, the front sometimes with two minute tubercles arranged transversely, the nuchal constriction very feeble; prothorax continuously rounded at the sides and base; scutellum smooth; elytra very smooth, having only two discal series of small and very remotely separated punctures, the inner subsutural, the flanks punctured; abdomen with strong and peculiarly remote punctures; anterior coxæ very asperately punctured. [Type *Q. vernix* Lec.].....**Anaquedius**
Antennæ not filiform, more or less incrassate distally; tarsi more or less pubescent above.....5
5—Labrum entire; infra-ocular ridge very fine but entire; nuchal constriction fine and feeble.....6
Labrum bilobed.....7
6—Body of rather large size, parallel; head oval, with moderately large

though not prominent eyes, the labrum large; prothorax widest very near the base, not much narrowed thence to the apex; elytra and abdomen with close-set punctures; hind tarsi with the basal joint long, the fifth shorter than the first. [Type *Q. molochinus* Grav.] ..... **Quedius**

Body small in size, more fusiform; head rounded, the eyes large but only moderately prominent, the labrum very short; prothorax orbicular; elytra and abdomen punctured throughout; hind tarsi smaller, the first joint relatively much shorter, not as long as the fifth. [Type *Q. debilis* Horn] ..... **Quediellus**

7—Front with two discal impressions, which are generally punctiform and arranged transversely; head orbicular, the eyes more or less well developed but seldom distinctly prominent; nuchal constriction feeble; prothorax orbicular; elytra variably punctate, generally almost evenly but sometimes having very few punctures; scutellum always smooth; abdomen rather closely punctured; hind tarsi normal, the first and last joints elongate and subequal. [Type *Q. capucinus* Grav.] ..... **Distichalius**

Front without two discal punctures 8

8—Head oval or oblong-oval; integuments polished as usual; pronotum never explanate laterally 9

Head quadrate; eyes moderate but prominent; pronotum subexplanate at the sides; integuments shining 10

Head triangular, widest basally; eyes small, not at all prominent; pronotum subexplanate at the sides; integuments more or less opaculate 11

9—Body moderate to rather large in size; eyes as in *Distichalius*, the nuchal constriction similarly feeble, the prothorax, elytra and abdomen nearly similar, except that the punctuation of the latter two is always regular and more or less close-set; infra-ocular carina strong; hind tarsi regular, the first and last joints much elongated; scutellum smooth or punctate. [Type *Staph. fulgidus* Fabr.] **Microsaurus**

Body small in size, more slender, feebly fusoid; eyes generally very large and prominent; nuchal constriction usually rather deep; elytral sculpture varying as in *Distichalius*, the abdominal punctures regular to irregular; hind tarsi as in the preceding, the infra-ocular carina much feebler. [Type *Q. fulvicollis* Steph. (*hyperboreus* Er.)] **Raphirus**

10—Color always testaceous throughout; habits frequently subcavernicolous; antennæ thick but not fusiform; elytra and abdomen finely, closely punctate; hind tarsi rather thick, feebly tapering, the joints having the usual proportions; body moderately large in size, subparallel; infra-ocular carina very fine but entire. [Type *Q. spelæus* Horn] ..... **Quediochrus**

11—Color always deep black throughout; habits probably secluded as in the preceding; antennæ very thick and strongly fusiform; elytra and abdomen very finely and densely punctured throughout; hind tarsi thick and gradually tapering, nearly as in the preceding but still

more hairy; body large in size and subparallel, the abdomen relatively narrower than in any of the preceding. [Type *Q. explanatus* Lec.]
Megaquedius

Whether these groups are to be considered genera or not, depends entirely upon the opinion of various systematists; by Dr. Horn, they were not considered as even worthy of numbered or lettered sectional distinction; by the authors of the latest European catalogue, they are considered subgenera. *Quedionuchus* was put forward by Dr. Sharp as a fully valid genus, quite distinct from *Quedius*. Personally I am not only inclined to agree with the latter author in this opinion, but believe it best to consider them all as genera provisionally, although some are more closely related among themselves than others, as in the case of *Microsaurus* and *Distichalius* for instance. Possibly one or more of them, as for example *Quediellus*, may prove to be the American equivalents of some European groups which are not represented in my collection just now, but I do not consider this as altogether probable and believe it rather more likely that the European *Sauridus* Rey is itself composite, as also *Raphirus* Steph.

Hemiquedius n. gen.

The type of this genus and the only species known thus far, the *Quedius ferox* of LeConte, differs from any other hitherto closely associated with *Quedius*, in its very parallel form, polished and almost sculptureless elytra, slender antennæ, in which feature it resembles only the equally shining and sculptureless, though otherwise unrelated, *Quedius vernix*, and, especially, in its subquadrate prothorax, which suggests some affinity with *Staphylinus*. The species has been sufficiently described by Horn (Tr. Am. Ent. Soc., 1878, p. 166) and is so well known to all interested in the present tribe, that further notice of it is unnecessary in the present outline notes.

Quedionuchus Sharp.

The above remarks in regard to general knowledge of the type, apply also to the *Quedius lævigatus* of Gyllenhall, for it is so well known that no further elucidation of it is now necessary. It should be said, however, that *longipennis* Mann., is a species quite different from *lævigatus*, being more slender, with rufous and much more

elongate elytra, smaller head and smaller, more parallel and more quadrate prothorax, on which the minute wavy sculpture is so strong that it imparts an æneo-opalescent lustre, wholly foreign to *lævigatus; rufipennis* Mäkl., is probably synonymous with *longipennis*.

Paraquedius n. gen.

Another singularly isolated species, the *Quedius puncticeps* of Horn, has to serve as the type of a very distinct group of the old genus *Quedius*, with either a generic or subgeneric status,—in greater probability the latter than the former, though in either case it is in large degree a matter of opinion. The body is moderately narrow, subparallel, very highly polished throughout, black in color, sometimes with feeble æneous lustre. The head is short and rhomboidal, because of the great prominence of the eyes, and the two impressions on the front, widely and transversely separated between the eyes, are conspicuous; the antennæ are rather long, fully as long as the head and prothorax, with the penultimate joint somewhat longer than wide even on the compressed side; the prothorax is rather longer than wide, oval and not evidently wider than the head, the parallel elytra distinctly wider, though somewhat longer than wide, the evenly distributed and not very close-set punctures notably fine; there is a feeble impression at the inner apical angle of each elytron in my single specimen. The abdominal punctures are very minute and sparse, rather closer basally, the first three segments more than usually impressed transversely at base. The length is about 7.5 mm., and it is an inhabitant of Vancouver Island. No other species has been discovered thus far.

Anaquedius n. gen.

This group is, like *Hemiquedius* and *Paraquedius*, monotypic at present, but, in spite of this, I can see no other very rational course than to regard the *Quedius vernix* of LeConte, as of truly generic value; it is certainly inharmonious with the other species, not only in its striking habitus but in many important structural characters, such as the long and very slender, filiform antennæ and the completely unimpressed abdominal segments, with peculiarly coarse and remotely scattered punctures and absence of sexual modifica-

tion at the apex of the sixth ventral. The very shining, almost impunctate elytra do not form so conclusive a generic character, since this feature occurs in some other groups merely as one of the extremes of sculpture, the elytra being fully punctured to subimpunctate within generic limits, as in *Distichalius*, but the glabrous upper surface of the tarsi is an important differential character.

Quedius Steph.

The type of this genus, which may be assumed to be *molochinus* Grav., is more essentially subarctic in range, both in the palæarctic and nearctic faunas, and the numerous American examples at hand are from Rhode Island to Minnesota and southward in the Atlantic regions to Southern Pines, North Carolina. There are a number of closely related forms of *molochinus* in the European fauna, a male from Morea before me differing, for example, from a male from Dalmatia, in its rather smaller head, distinctly less elongate antennæ and stronger and less dense sculpture of the elytra and abdomen, and our representatives differ in having the sinus of the sixth male ventral segment distinctly deeper than in either of the European examples cited; the elytra in our forms are also slightly more abbreviated and of a more obscure rufous, frequently being black like the rest of the upper surface. A female from Duluth has much shorter antennæ than another from Rhode Island. To work out these various subsidiary forms and determine their degree of constancy and relative importance taxonomically, would require large series from many localities, but in the case of the following modification, the differences are so numerous and manifest, that there can be no doubt that geographic isolation has in this case served to develop a distinct species from the old stock:

Quedius strenuus n. sp.—Body stouter and more fusiform than in *molochinus*, intense black throughout, the elytra never rufescent; head nearly similar in its broadly oval form and arrangement of the few coarse foveæ, but with the antennæ slightly longer; prothorax nearly similar but more distinctly wider than long; elytra more nearly equal in length to the prothorax, narrower than the latter at base but subequal thereto in width at apex, not quite so abbreviated, densely punctate; abdomen more finely and densely punctate, the sinus of the sixth ventral deeper, being virtually as deep as wide. Length (♂ ♀) 10.5–11.3 mm.; width 2.2–2.5 mm. Numerous examples from Texas (Austin) and Arizona (Tucson).

This species can be distinguished easily by its entirely deep black coloration and broader, more fusoid form, besides the other characters stated above.

Quediellus n. gen.

The somewhat numerous species of this genus are among the smallest of the supergenus *Quedius*, to which the type was assigned by Horn; they have in fact no resemblance whatever to *molochinus* and other typical representatives of the restricted *Quedius*, the body being generally of fusiform outline and always of a pallid yellowish-brown color throughout. The sculpture differs greatly among the species, which, so far as known to me, may be briefly outlined as follows:

Elytral punctures sparse, those of the abdomen moderately fine and close 2

Elytral punctures very close, those of the abdomen extremely fine and dense throughout 5

2—Body more parallel; head only slightly narrower than the prothorax. Body piceous-brown, the abdomen slightly darker, the head blackish; head rounded, fully as long as wide, the eyes (♂) large, coming within less than a third their length of the nuchal constriction; infra-orbital carina extremely fine and feeble; prothorax rather longer than wide, subparallel, arcuate at the sides and rounded at base, with the usual anterior series of three punctures; scutellum smooth; elytra not quite as long as wide, together broadly, angularly emarginate at apex, at base only very slightly narrower than the prothorax, at apex equal in width to the latter; punctures very fine, sparse and somewhat unevenly distributed; abdomen slightly tapering, finely, rather sparsely punctate, the punctures finer and closer toward the bases of the basal segments; sixth ventral (♂) with a broad feeble sinus; legs slender. Length (♂ ♀) 3.8–4.3 mm.; width 0.8–1.0 mm. California (Siskiyou and Humboldt Cos.) and Oregon (Lane Co.) . . . . . **nanulus** n. sp.

Body distinctly fusiform, the head much narrower than the prothorax . . 3

3—Abdomen subimpunctate at the middle of the segments, except toward their bases; elytral punctures small and sparse but deep and very distinct. Body larger and more fusoid than in *nanulus*, similar in coloration; head rounded, smaller, the eyes subsimilar, large, approaching the nuchal constriction by less than half their length; antennæ a little longer and less filiform, more incrassate distally and more slender basally; prothorax larger, nearly as wide as long, orbicular; elytra at base as wide as the prothorax and at apex a little wider, somewhat longer than the prothorax, and not shorter as they are in *nanulus;* abdomen distinctly tapering, the sixth ventral (♂) with the notch larger and more than twice as deep as in *nanulus*,

rounded, the adjoining surface triangularly impressed; legs and tarsi very slender. Length (♂ ♀) 4.7–5.2 mm.; width 0.9–1.2 mm. California (Sonoma to Humboldt Co.). Abundant... **debilis** Horn

Abdomen subevenly, moderately closely punctate throughout; elytral punctures sparse, extremely minute and feeble, very much less distinct than in *debilis* but somewhat as in *nanulus*.....4

4—Body nearly as large as in *debilis* but more narrowly fusiform, similar in coloration; head still smaller but otherwise similar, the antennæ (♀) extending to the middle of the pronotum, the nuchal constriction similarly rather deep; prothorax smaller, more rounded at the sides, as wide as long; elytra larger than in *nanulus*, almost as in *debilis* in relative size and proportion; abdomen more rapidly tapering behind the middle, the punctures more minute and not quite so close-set as in *debilis;* legs very slender; hind tarsi as usual in the genus, the basal joint not quite so long as the fifth, the latter not so long as the three preceding combined. Length (♀) 5.0 mm.; width 1.1 mm. Montana (Helena).....**helenæ** n. sp.

Body much smaller, not even quite so large as in *nanulus* and narrower and more fusiform; coloration as in the preceding species; head much smaller than the prothorax, almost exactly circular, the eyes large as usual and evenly continuing the curvature of the sides; antennæ moderately incrassate, extending to about the middle of the pronotum; prothorax subcircular, though broadly truncate at apex as usual, rather wider than long; elytra relatively even larger than in *debilis* and very much larger than in *nanulus*, fully as long as wide and distinctly longer than the prothorax, together broadly and feebly sinuate at apex, at base as wide as the prothorax, at apex evidently wider; abdomen distinctly tapering throughout, the sixth ventral (♂) with the apical sinus broader and deeper than in *nanulus*, somewhat as in *debilis* but much shallower and with the adjoining surface not impressed. Length (♂) 3.8 mm.; width 0.8 mm. California (Soda Spring, Anderson Valley, between Sonoma and Mendocino Cos.). This is the smallest species of the *Quedius* series. **humilis** n. sp.

5—Form more parallel than in the preceding and larger in size, piceous, the elytra flavate, the head black; legs shorter, less slender, pale in color; head orbicular, rather wider than long, the eyes large, evenly continuing the curve of the sides and coming within about a third their length of the nuchal constriction; antennæ flavate, rather thick, barely incrassated, not extending quite to the middle of the pronotum; front anteriorly with two feeble transverse impressions in the type; prothorax large, suborbicular, rather wider than long, not quite so rounded at base, much wider than the head, the three punctures of the series very fine and feeble; scutellum very smooth; elytra much shorter than wide, as long as the prothorax and a little narrower, subparallel, the minute punctures very close-set; abdomen parallel, narrowing apically, minutely, extremely closely and evenly punctulate, the sixth dorsal more sparsely and less finely; sixth ventral (♂) with a deep notch medially, which is acute and formed like a cusp-point, the adjoining surface feebly impressed and smooth;

tarsi shorter and thicker than in the preceding forms. Length (♂) 5.7 mm.; width 1.2 mm. Montana (Mullan),—Wickham.
densiventris n. sp.

Dr. Horn, in describing *debilis* (l. c., p. 165), confused two distinct species, as shown by size, outline of the body, relative size and strength of elytral punctuation and sexual characters at the apex of the last ventral plate; as he mentions Clear Lake first in his citation of localities, I assume that the larger and more strongly punctured form is the typical *debilis* and have so identified it above. Of *nanulus*, which is a more northern species, shorter, more parallel and more compact than *debilis*, with very much smaller and feebler notch at the ventral apex of the male, I have a large series from Siskiyou Co., exhibiting no notable variability; possibly it may be the same species as the Vancouver specimen cited by Horn under his description of *debilis*.

Distichalius n. gen.

The chief characters distinguishing this group from *Microsaurus*, are the instability of elytral sculpture and the presence of two punctures, or less definite impressions, arranged transversely on the discal part of the front and not to be confounded with the usual very persistent puncture in nearly the same line but adjoining the eye. I am by no means satisfied that these characters will serve effectively for more than subgeneric distinction, although in comparing *Quedius capucinus* and *fulgidus*, the differences in habitus seem to be very pronounced and apparently generic. The two punctures of the front referred to, are apt to appear accidentally in more or less irregular form in some other, not closely related species, and, in *puncticeps* Horn, they are also present but are larger and more widely separated than in any species of *Distichalius*. The species are rather numerous, those now in my collection being definable as follows:

Elytral punctures wholly wanting on a large part of the surface.....2
Elytral punctures covering the entire surface but sparse and very irregular, in great part fine, but with coarser punctures intermingled toward the sides.....3
Elytral punctures closer, stronger and evenly distributed throughout the surface.....4
2—Body moderately stout and convex, shining, deep black throughout, the legs piceous, the antennæ blackish; head somewhat quadrate-

oval, the eyes (♀) separated by fully two-thirds their length from the nuchal constriction, the antennæ (♀) rather thick, evidently incrassate, extending somewhat beyond the middle of the pronotum, a little longer in the male; prothorax a third wider than the head, as long as wide, widest near the base, the sides feebly converging and but slightly arcuate, the three punctures of the series distinct; scutellum very smooth; elytra about as long as the prothorax, at base nearly, at apex quite, as wide as the latter; surface of each with three irregular series of widely separated and moderate punctures, and a postero-external area of closer punctuation, the flanks with numerous punctures; abdomen finely, rather closely, evenly punctate, the last ventral (♂) with a rounded notch, twice as wide as deep, the adjacent surface conically impressed and smooth. Length (♂ ♀) 6.7–8.3 mm.; width 1.35–1.6 mm. New York to Virginia (Newport News) and westward to Iowa (Keokuk). [*Q. inversus* Say, *bardus* Mels. and *ater* Zieg. . . . . **capucinus** Grav.

Body nearly similar in color, lustre and sculpture, but smaller, the head smaller, more evenly circular, the antennæ a little longer, notably more slender, gradually moderately incrassate distally but not so thick as in *capucinus;* eyes a little larger, separated by half their length from the constriction; puncture between the eyes and constriction larger and still more foraminiform than in *capucinus* and situated much nearer to the eye than in that species; prothorax nearly similar but shorter, much wider than long, the anterior series more diverging; elytra rather longer than the prothorax, otherwise nearly as in the preceding, except that the area of punctuation externally at apex is in great part wanting and the punctures of the flanks very minute and much sparser; abdomen more finely punctulate; legs and especially the hind tarsi, very much shorter than in the female of *capucinus.* Length (♀) 5.5 mm.; width 1.2 mm. Nevada (Ormsby Co.),—Baker. . . . . **nevadensis** n. sp.

3—Form moderately stout, fusoid, shining, piceous, the head and pronotum generally black, the elytra with fine testaceous apical margin; head orbicular, the eyes at about three-fourths their length from the nuchal constriction, the antennæ moderately long and incrassate, the outer joints about as long as wide; prothorax wider than long, strongly rounded at the sides and base and strongly narrowed anteriorly; elytra large, rather longer than wide, much longer and, apically, wider than the prothorax, at base sometimes narrower than the latter, especially in the male, the punctures small and sparse, becoming fine and closer laterally, intermingled with slightly larger punctures on the disk; abdomen sometimes feebly iridescent, rather finely, moderately closely punctate; sixth ventral (♂) with a small shallow sinus, the surface thence anteriorly decreasingly but distinctly impressed and smooth; hind tarsi as long as the tibiæ or nearly so. Length (♂ ♀) 6.3–8.3 mm.; width 1.6–1.85 mm. Alaska, Queen Charlotte Islands and British Columbia (Metlakatla) to Sta. Cruz, California. Very abundant. [*Quedius marginalis* Mäkl.] **marginalis** Mäkl.

4—Frontal impressions punctiform and distinctly defined. 5

Frontal impressions shallow and diffuse; eyes very large, at less than a third their length from the nuchal constriction.....7

5—Eyes moderately large as in the preceding species, separated by more than half their length from the constriction. Body moderately stout and fusoid, piceous-black, the head and pronotum deep black, the elytra dark red-brown, the abdomen blackish, the apices of the segments finely paler; head moderate, orbicular, all the regular foveæ very large and deep; antennæ blackish, the outer joints wider than long; prothorax nearly as in *marginalis* but rather less transverse, the three punctures of the anterior series coarse; elytra distinctly longer and a little wider than the prothorax, with slightly diverging sides and fully as long as wide as in *marginalis*, but with the punctures stronger, more than twice as numerous and more even in distribution; abdomen finely, rather densely punctate; notch at the ventral apex (♂) very small and shallow, obtuse; hind tarsi shorter than the tibiæ. Length (♂ ♀) 5.5–6.7 mm.; width 1.2–1.3 mm. Alaska (Fort Wrangell) and British Columbia (Metlakatla). Very abundant. [*Quedius brunnipennis* Mann.]....**brunneipennis** Mann.

Eyes large, at much less than half their length from the constriction..6

6—Body subparallel, rather convex, shining, piceous-black, the head black, the elytra strongly æneous; head orbicular, the eyes at a third their length from the constriction, the foveæ moderate, the postero-juxtocular very close to the margin of the eye; antennæ moderate, not very incrassate, piceo-rufous in color, paler at base; prothorax slightly transverse, moderately rounded at the sides and anteriorly narrowed; elytra ample, fully as long as wide, with barely diverging sides, at base fully as wide as the prothorax, at apex wider; punctures evenly distributed, strong and everywhere rather widely separated; abdomen finely, closely punctate, the segmental apices pallescent; hind tarsi distinctly shorter than the tibiæ. Length (♀) 5.2 mm.; width 1.15 mm. Manitoba (Aweme),—Criddle.....**agnatus** n. sp.

Body elongate-fusiform, with very much smaller head, shining, black, the elytra æneous, the legs testaceous; antennæ blackish throughout, not pale at base; head relatively smaller than in any other species, orbicular, barely two-thirds as wide as the prothorax, the eyes at two-fifths their length from the constriction, the postero-juxtocular puncture very coarse and rather close to the eye; antennæ moderate, not very incrassate; prothorax nearly as long as wide, widest near the base, the sides thence moderately converging and rather feebly arcuate to the apex, the base circularly rounded; three anterior punctures normal and in straight line; elytra large, rather longer than wide, at base fully as wide as the prothorax and thence gradually wider posteriorly; punctures very fine, even, rather well separated; abdomen gradually tapering, finely and somewhat unevenly punctate, the punctures denser toward the segmental bases; sixth ventral (♂) with a small shallow apical sinus and adjoining smooth triangular impression; hind tarsi very slender, slightly shorter than the tibiæ. Length (♂ ♀) 5.0–6.0 mm.; width 0.95–1.1 mm. Virginia (Hampton Roads) and New Jersey (Atlantic City). Eight examples.....**virginicus** n. sp.

7—Form moderately stout, rather convex, shining, evenly dark red-brown in color, the head black; legs piceous, the antennæ blackish, not pale at base; head large, orbicular, five-sixths as wide as the prothorax, the eyes large and prominent, at less than a third their length from the constriction, the frontal impressions much more widely separated than in any of the preceding species, subpunctiform; antennæ rather slender, the outer joints fully as long as wide, the second and third equal and together not distinctly longer than the first; prothorax orbicular, barely wider than long, strongly arcuate at the sides and base, the three dorsal punctures deep, in straight line; elytra scarcely as long as wide, everywhere narrower than the prothorax, finely, rather closely punctate, the punctures asperulate; abdomen gradually tapering, finely, very evenly punctate, the punctures widely separated, rather more so than those of the elytra; sixth ventral (♂) with a distinct rounded sinus about three times as wide as deep, the adjoining surface feebly impressed for a short distance; hind tarsi slender, distinctly shorter than the tibiæ. Length (♂) 4.5 mm.; width 0.9 mm. British Columbia (Inverness),—Keen.

oculeus n. sp.

Form slightly stouter, a little larger in size, the type pale tawny-testaceous throughout, the head black; legs pale; antennæ notably slender, rather longer than the head and prothorax, all the joints longer than wide, pale brown, blackish basally; head orbicular, three-fourths as wide as the prothorax, the eyes very large, at less than a third their length from the constriction, the posterior puncture very close to their inner margin; frontal impressions large, shallow and rather indefinite; prothorax subquadrate-orbicular, about as long as wide, the parallel sides evenly and strongly arcuate, the punctures as in *oculeus;* elytra shorter than wide, as long as the prothorax and, apically, somewhat wider, the punctures rather strong, subasperate and close-set; abdomen barely visibly tapering, the punctures moderate, evenly distributed, asperulate and much more widely separated than those of the elytra; sixth ventral (♂) with an apical sinus nearly as in the preceding but more angular; hind tarsi slender. Length (♂) 5.5 mm.; width 1.25 mm. California (a single specimen, without more definite record of locality).....**sparsus** n. sp.

Agnatus without doubt closely resembles *œnescens* Mäkl.,* from the Island of Sitka, but according to the description given by Mannerheim, the elytra are much more closely punctate in that species and the sides are rufescent, a character not observable in *agnatus*. If *virginicus* was known to Dr. Horn, I am at a loss to know how he disposed of it; the head is so notably small that the general aspect of the species is peculiar; the second and third antennal joints are subequal and together about as long as the first.

* This species was properly included in Dr. Horn's table of *Quedius* species, but he gave no description of it in the text.

Marginalis Mäkl., is altogether different from *capucinus* and entirely valid as a species; the outer antennal joints are much shorter and more transverse in some males than in others, but I have not been able to differentiate any distinct subspecies. *Pediculus* Nord., is unknown to me. It is highly probable that *melanocephalus* Mann., was founded upon an immature specimen of *marginalis*, the frontal punctures having been overlooked.

Microsaurus Steph.

This group is a rather natural continuation of the preceding, but the head is more oblong or subquadrate, or more abruptly narrowed at base to the nuchal constriction, and frontal punctures on the disk, of the kind distinguishing *Distichalius*, are unknown. The genus or subgenus is divisible into two rather distinct groups, based upon the sculpture of the scutellum as follows:

Scutellum perfectly smooth and punctureless as in *Distichalius*.....2
Scutellum punctured.....10

2—Head elongate, the eyes not prominent and at much more than their own length from the nuchal constriction. Body moderately stout, subfusiform, shining, black, the prothorax rufous, sometimes blackish, the abdomen blackish-piceous, with the segmental apices paler; sometimes the entire body is testaceous, with the bead blackish; head parallel and feebly arcuate at the sides, the posterior lateral puncture at a great distance from the eye; antennæ moderately long and incrassate, infuscate, paler basally; prothorax nearly as long as wide, rounded at the sides and base, the former gradually converging and less arcuate apically, much wider and a little longer than the head, the tripunctate series distinct; elytra slightly shorter than wide, fully as wide as the prothorax, somewhat narrower basally; punctures moderate, distinct, not very close-set, asperulate; abdomen subparallel, slightly narrowing arcuately toward tip, finely, rather sparsely punctate, the punctures separated as widely as those of the elytra; sixth ventral (♂) with a small and not very deep sinus, the adjacent surface briefly and very slightly impressed; tarsi rather slender. Length (♂ ♀) 7.5–10.0 mm.; width 1.35–1.8 mm. Rhode Island and District of Columbia to Lake Superior. Abundant. [*Queduis peregrinus* Grav. and *silvicola* Csy.] *Terminatus* Mels., not known to the writer, is probably subspecifically different.
peregrinus Grav.

Head never elongate, subquadrate to broadly oval.....3

3—Eyes separated from the nuchal constriction by at least about half their own length.....4
Eyes large, separated by distinctly less than half their length from the constriction.....9

4—Eyes nearly as in *peregrinus*, scarcely at all prominent, situated at nearly one-half more than their own length from the constriction. Body moderately slender, rufo-fuscous, the head and elytra black or blackish, shining; head oblong-oval, about as long as wide, the sides behind the eyes subevenly and distinctly arcuate to the rather deep constriction, otherwise somewhat as in *peregrinus;* antennæ not quite as long as the head and prothorax, only moderately incrassate, the outer joints nearly as long as wide; prothorax short, a fourth or fifth wider than long, the subparallel sides strongly arcuate, continuous with the strongly rounded base, the triple punctures fine and feeble; elytra nearly as long as wide, much longer than the prothorax, at base slightly narrower, at apex fully as wide as, the latter to wider; punctures fine, not very close-set; abdomen with the fine punctures only a little more close-set than those of the elytra, rather well separated; sixth ventral (♂) with the apical sinus about a third of its width, subcircularly rounded, the adjoining surface shallowly impressed; hind tarsi slender, not quite as long as the tibiæ. Length (♂ ♀) 7.3–7.6 mm.; width 1.35 mm. California (Siskiyou Co. and Lake Tahoe).....**rutilans** n. sp.

Eyes evidently prominent and convex, always very moderate in size..5

5—Head with the sides behind the eyes strongly converging and evenly, very feebly arcuate to the constriction, which is fine and feeble. Blackish-piceous, very shining, the head deep black, the elytra dark umber-brown, the apex and sutural margin very finely testaceous; legs pale piceous-brown; head rhomboid-oval, fully as long as wide, the eyes notably prominent and at just visibly less than their own length from the constriction; antennæ moderate, the outer joints nearly as long as wide, the second shorter than the third, fuscous, the basal joints testaceous; prothorax rather short, a fourth wider than long, the sides and base continuously arcuate, the former slightly converging but arcuate anteriorly; triple punctures very moderate; elytra as long as wide, distinctly longer than the prothorax, at base slightly narrower, at apex fully as wide as, the latter; punctures moderate in size, sparse and strongly asperate; abdominal punctures finer than those of the elytra and not asperate but equally sparse; sixth ventral (♂) with the sinus about three times as wide as deep, the adjoining surface briefly and feebly impressed; hind tarsi slender. Length (♂) 5.7 mm.; width 1.15 mm. Canada (Kazubazua, Province of Quebec),—Beaulne....**canadensis** n. sp.

Head more oblong, with the sides, as a rule, more abruptly converging at base to the moderate to rather deep constriction.....6

6—Head without a puncture near the inner margin of the eyes. Body subparallel, rather stout, moderately convex, polished, piceous-black, the head black, the elytra and apices of the abdominal segments rufous; legs piceous; antennæ testaceous, gradually infuscate distally, not quite extending to the thoracic base, moderately incrassate, the outer joints nearly as long as wide, the second shorter than the third; head scarcely as long as wide, the eyes separated from the constriction by just visibly more than their own length; prothorax widest near the base, the sides thence converging and feebly arcuate

to the apex, the base strongly arcuate, the angles very broadly rounded, having only a single fine discal puncture of the usual tripunctate series and otherwise, on the disk, having only a large fovea near apical third at some distance from the edge; elytra nearly as long as wide, distinctly longer than the prothorax and at base narrower, at apex subequal, to the latter in width; punctures fine and widely separated but asperate and distinct; abdomen minutely and scarcely less loosely punctate throughout, the anterior tarsi of the female feebly dilated basally, the posterior missing in the type. Length (♀) 7.2 mm.; width 1.65 mm. Manitoba (Aweme),—Norman Criddle. . . . . **criddlei** n. sp.

Head with the usual coarse puncture adjoining the eyes anteriorly. . . . 7

7—Posterior sublateral discal fovea of the head at a distance from the eye fully equal to the entire length of the latter. Body rather slender, shining, pale testaceous in color, the elytra generally more flavate, the head black; pronotum piceous-black, the legs and antennæ testaceous; head subquadrate, the sides behind the eyes distinctly longer than the latter, straight and parallel nearly to the rather deep constriction, then rounding obliquely to the latter; antennæ rather stout and moderately incrassate, the outer joints shorter than wide; prothorax fully a fourth wider than long, the sides strongly rounded posteriorly, very convergent and straighter anteriorly, the base strongly rounded; tripunctate series distinct; scutellum black; elytra about as long as wide, distinctly longer than the prothorax and at base a little narrower, the punctures rather strong, widely separated, not acutely asperulate; abdomen parallel, tapering only apically, the punctures fine, asperulate, about half as widely separated as those of the elytra; sixth ventral (♂) with a small and moderately deep sinus. Length (♂♀) 7.5–8.7 mm.; width 1.5–1.75 mm. Queen Charlotte Islands, California (Sta. Cruz Co.) and New York (Ithaca). [*Quedius erythrogaster* Mann.] **erythrogaster** Mann.

Posterior sublateral discal fovea of the head not so large and distant from the eye by one-half the length of the latter. 8

8—Body moderately stout, shining, deep black throughout, the elytra sometimes piceous-black, the legs and antennæ blackish-piceous; head broadly oval, as long as wide—omitting the labrum and mandibles as usual,—the tempora converging and arcuate behind the eyes and distinctly longer than the latter, not more abruptly converging near the constriction; antennæ moderately slender, shorter and much thicker in the female; prothorax only a fifth or sixth wider than long, almost evenly and strongly rounded at the sides and base, the tripunctate series distinct; elytra large, as long as wide, longer than the prothorax and, at apex, somewhat wider, at base just visibly narrower, than the latter; punctures small and widely separated, not asperate but distinct, those of the abdomen only a little smaller or less separated; sixth ventral (♂) with a small and extremely shallow sinus at apex, the adjoining surface with a small oval impression; hind tarsi thick, about as long as the tibiæ, the fifth joint longer than the first. Length (♂♀) 8.0–9.5 mm.; width 1.8–2.0

mm. British Columbia (Metlakatla), California (Lake Tahoe), Iowa (Keokuk) and New York (Lake Champlain and near the city). Abundant. [*Quedius grœnlandicus* Zett.]. . . . **mesomelinus** Marsh.

Body rather stout, shining, black, the legs and antennæ blackish-piceous, the elytra bright red; head stouter, somewhat wider than long, the tempora feebly converging and broadly arcuate to the constriction, rather more arcuate near the latter and slightly longer than the eyes; antennæ not so long and much thicker than in the preceding, the outer joints shorter than wide; prothorax shorter, a fourth wider than long, the sides less arcuate, the base equally strongly so; disk feebly subexplanate postero-externally; tripunctate series distinct; scutellum black; elytra relatively not quite so large, about as long as wide, barely longer than the prothorax and, at base, distinctly narrower than the latter, the punctures small and widely separated but very distinct, those of the abdomen still smaller but equally widely separated; sixth ventral (♂) with the apical sinus so feeble as to be barely traceable, the adjoining surface not at all modified; hind tarsi less thick than in *mesomelinus*, with the first joint somewhat longer than the fifth. Length (♂) 7.8–9.5 mm.; width 1.65–2.0 mm. Iowa (Keokuk) and Indiana. [*Quedius iracundus* Say.] **iracundus** Say

9—Form rather stout, pale yellowish-brown in color, the pronotum testaceous, the head black, picescent anteriorly; legs and antennæ pale ochreous throughout; head shorter than wide, the eyes large and rather prominent, the short tempora rapidly converging and arcuate behind them to the deep nuchal constriction, the two foveæ both very close to their inner margin, the posterior the larger; antennæ moderate, not very incrassate, the outer joints fully as long as wide to a little longer, the second slightly though evidently shorter than the third; prothorax large, only a little wider than long, the sides and base continuously and strongly arcuate, the sides anteriorly feebly converging and less arcuate; tripunctate series evident; scutellum piceous; elytra slightly shorter than wide, at base narrower than the prothorax, the apex fully as wide as the latter; punctures fine, asperulate and close-set throughout, only half to a third as widely separated as those of *erythrogaster* and very much finer, the hairs fine and pallid; abdomen with minute and still denser punctulation, less dense on the apical segments; sixth ventral with a peculiar broad and deep sinus, very acute at the bottom and with arcuate flaring sides, or cuspidiform, the adjoining surface triangularly and feebly impressed and smooth; hind tarsi rather long and slender. Length (♂) 6.4 mm.; width 1.7 mm. British Columbia (Stikine River),—Wickham. . . . . **breviceps** n. sp.

10—Sides of the prothorax more converging and less arcuate anteriorly; larger species 11

Sides of the prothorax parallel and subevenly arcuate throughout their length; body smaller and narrower, the elytra frequently notably short 15

11—Eyes larger, at their own length from the very moderate nuchal constriction. Body more or less stout (♀), or rather slender (♂),

shining, piceous-black, the head black; pronotum generally obscure, with pale side margins, the elytra less obscure to rather bright rufous; legs and antennæ piceous-brown; head as long as wide to rather longer, oval, with a fovea adjacent to the eye before the middle, another at a third the length of the eye obliquely behind the latter and two or three smaller near the base; antennæ well developed, the outer joints as long as wide or nearly, the second much shorter than the third; prothorax about as long as wide, testaceous to black, strongly rounded at base; elytra about as long as wide, with diverging sides, equal in length to the prothorax, the punctures small but distinct, rather close-set, sparser than in *breviceps* but closer than in the *mesomelinus* series; abdomen with fine and notably dense punctures; sixth ventral (♂) with a small shallow rounded sinus, four times as wide as deep, the adjoining surface feebly impressed for a short distance. Length (♂ ♀) 7.0–8.0 mm.; width 1.35–1.6 mm. Vancouver Island, California (Humboldt, Lake and San Mateo Cos.) and one example labeled Guadalupe Island—probably an adventitious importation. Abundant. [*Quedius limbifer* Horn]..... **limbifer** Horn

Eyes at distinctly more than their own length from the constriction; pronotum never so definitely paler at the sides..... 12

12—Antennæ shorter and more incrassate, the outer joints much shorter than wide. Moderately stout, shining, brownish-testaceous, the abdomen blackish, the head black; legs and antennæ ochreo-testaceous; head notably shining, subquadrate, the tempora feebly converging and nearly straight almost to the base, where they are rather abruptly rounded inward; surface without trace of minute punctulation above, but with numerous distinct punctures throughout between the eye and the constriction, having also an anterior fovea adjacent to the eye, two arranged transversely near the posterior edge of the eye and one between the eye and the constriction, slightly nearer the latter; prothorax fully as long as wide, much rounded at the base and at the sides posteriorly; elytra but slightly expanding and as long as wide, as long as the prothorax, at base slightly narrower than the latter, the punctures rather close-set, small but strong and distinct; abdomen having extremely minute and moderately close punctulation, the pubescence rather long, close and conspicuous. Length (♀) 7.8 mm.; width 1.55 mm. Arizona (Fort Yuma). A single example taken by the writer on the east bank of the Colorado River. [*Quedius desertus* Horn]..... **desertus** Horn

Antennæ longer, relatively less incrassate, the outer joints about as long as wide in both sexes..... 13

13—Head with only a few very fine scattered punctures at the sides, between the eyes and the constriction, and with the diffused punctulation of the entire upper surface excessively minute and subobsolete. Body pale piceo-rufous in color, the head and abdomen slightly more obscure; head fully as long as wide, the tempora feebly converging and feebly, subevenly arcuate between the eyes and the constriction, the anterior lateral fovea as in the preceding, having, also, inwardly near the hind limit of the eyes, another, and one on the flank midway between the eye and constriction; more dorsally there

is a still larger fovea midway between the eye and constriction; at base there are two smaller approximate punctures; prothorax nearly as in the preceding but shorter and broader, not quite as long as wide; elytra parallel, not quite as long as wide and everywhere narrower than the prothorax, the punctures strong and moderately close-set; abdomen with very minute punctules, separated as widely as the punctures of the elytra; sixth ventral (♂) with a large subangular shallow sinus, about five times as wide as deep, the adjoining surface feebly impressed and smooth for a short distance. Length (♂) 8.0 mm.; width 1.6 mm. Arizona (locality unrecorded). On the right side of the head in the type, the large fovea near the eye posteriorly, is replaced by two or three small punctures in a line parallel to the limb of the eye..... **rubidulus** n. sp.

Head at the sides with many small diffused punctures, the entire upper surface with minute but evident punctulation, the entire under surface with fine sparse punctures..... 14

14—Body rather stout, much larger than in either of the preceding, obscure rufous in color, the abdomen blackish, the head black; surface moderately shining; head somewhat opalescent, not quite as long as wide, the tempora feebly, then more strongly, converging to the constriction; fovea one next the eye anteriorly, two midway between the eye and contriction subdorsally, three very small and midway between the eye and constriction on the flanks; near the constriction there are two small approximate foveæ arranged transversely; there is no trace of the large fovea near the eye postero-dorsally visible in the preceding species; antennæ fuscous, testaceous basally; prothorax in both sexes relatively much smaller than in *rubidulus*, fully a fifth wider than long, the sides basally and the base much rounded; tripunctate series distinct; scutellum with but few very fine punctures; elytra large, about as long as wide, rather longer than the prothorax and fully as wide; elytra strongly and rather closely punctate; abdomen with minute punctules, about as close-set as the elytral punctures; sixth ventral (♂) with a moderate and very shallow, broadly rounded sinus, the adjoining surface with a large triangular smooth flattened surface. Length (♂ ♀) 9.2–10.3 mm.; width 2.0–2.1 mm. Arizona (Pinal Mts.),—Wickham.

pinalicus n. sp.

Body still stouter, similar in coloration to *pinalicus* but more shining; head more shining, with the minute punctulation more distinct, the foveæ similarly arranged, except that near the constriction there are about three foveæ arranged more obliquely than in *pinalicus;* sides behind the eyes less parallel, similarly oblique basally; antennæ rather long, all the joints fully as long as wide; prothorax relatively larger than in *pinalicus*, the slopes postero-externally subexplanate, only very little wider than long, the sides and base similarly rounded; fine scutellar punctures stronger and more numerous; elytra slightly shorter than wide, scarcely as long as the prothorax, at base much narrower, at apex scarcely as wide, as the latter, rather strongly and closely punctate; abdomen with the minute punctules as close-set as the punctures of the elytra, rather stronger than in any of the

three preceding species; hind tarsi much shorter than the tibiæ, the first and fifth joints subequal in length. Length (♀) 9.8 mm.; width 2.15 mm. New Mexico (Jemez Springs),—Woodgate.

fontinalis n. sp.

15—Elytra shorter than the prothorax. Body parallel, rufo-piceous, shining, the head black; legs and antennæ dark testaceous; head rounded, as wide as long, the eyes not distinctly prominent, at evidently more than their own length from the constriction, the tempora rather strongly converging and broadly arcuate behind them, gradually a little more strongly near the constriction; surface polished, with extremely minute and rather sparse punctulation throughout; two coarse foveæ are very near the eyes and two arranged transversely behind the eyes but nearer the latter than the constriction; antennæ rather long, the outer joints fully as long as wide; prothorax as long as wide, the base more rounded than the sides, the tripunctate series distinct; there is also one small puncture more external anteriorly and a large one still more lateral at apical third; marginal punctures distinct; scutellum with very few minute punctures; elytra shorter than wide, feebly expanding from the base, where they are narrower, to the apex, where they are fully as wide as, the prothorax; punctures small and well separated, the hairs rather coarse; abdomen with fine sparse punctures, as remote as those of the elytra; hind tarsi with the first three joints decreasing uniformly and rapidly in length. Length (♀) 7.4 mm.; width 1.35 mm. Manitoba (Aweme),—Criddle.

curtipennis n. sp.

Elytra about as long as the prothorax, the head narrower and more oval 16

16—Elytra but slightly expanding from base, where they are fully as wide as the prothorax, to apex, where they are distinctly wider. Coloration and polished lustre nearly as in the preceding; head oval, rather longer than wide, the eyes at much more than their own length from the constriction, the tempora gradually converging and subevenly, moderately arcuate to the latter; foveæ somewhat as in the preceding; minute punctulation of the median parts invisible under moderate enlargement; antennæ shorter and more incrassate than in *curtipennis*, extending barely beyond the middle of the prothorax, the outer joints not quite as long as wide; prothorax rather small, nearly as long as wide, much rounded at base and nearly as much at the sides, the angles obliterated; punctures nearly as in the preceding; scutellum with more numerous fine punctures; elytra slightly shorter than wide, with rather strong and moderately close-set punctures; abdomen finely, somewhat closely punctate; basal joint of the hind tarsi fully as long as the next two combined. Length (♀) 6.4 mm.; width 1.25 mm. Montana (Mullan),—Wickham. . **montanicus** n. sp.

Elytra very rapidly expanding from base, where they are much narrower than the prothorax, to the apex, the sides being notably oblique. . 17

17—Body notably slender anteriorly, elongate-fusiform, shining, pale brownish-testaceous throughout, the head piceous; legs paler, the antennæ darker, ochreo-testaceous; head fully as long as wide, oblong-oval, the eyes at exactly their own length from the con-

striction, the tempora feebly converging behind them, basally rather abruptly more so; surface smooth, the foveæ somewhat as in the preceding species; antennæ extending about to the thoracic base, rather stout though barely at all incrassate distally, the outer joints fully as long as wide; prothorax rather small, of peculiar form, quadrate, with broadly rounded sides and base, the angles obliterated; tripunctate series feeble; scutellum with very few fine punctures; elytra much shorter than wide, at apex distinctly wider than the prothorax; surface nearly flat, with rather small, moderately close-set punctures; abdomen with fine, somewhat close punctures, gradually becoming stronger and sparse posteriorly; sixth ventral (♂) with a small shallow rounded sinus, less than a third as wide as the apex and four times as wide as deep, the adjacent surface not at all modified; hind tarsi slender, much shorter than the tibiæ. Length (♂) 7.0 mm.; width 1.33 mm. California (Siskiyou Co.),—Koebele.

divergens n. sp.

Body still more slender and smaller in size, similar in lustre and coloration, except that the elytra are relatively more pallid and flavescent, nearly like the legs in color; head oval, rather longer than wide, the eyes at a fourth more than their own length from the constriction, the tempora converging and feebly, evenly arcuate behind them, barely visibly more strongly at the constriction; foveæ nearly as in the preceding but conspicuously coarser, the minute punctulation of the general surface very sparse and barely visible; antennæ stout, extending about to the thoracic base, distinctly incrassate distally, the penultimate joints not quite as long as wide; prothorax slightly wider than long, relatively much larger than in the preceding but otherwise nearly similar; scutellum nearly smooth, having very few minute punctules apically; elytra small, shorter than wide, everywhere narrower than the prothorax and at base scarcely more than three-fourths as wide as the latter; punctures moderate in size and closeness but rather strongly asperate and conspicuous; abdomen finely, not at all closely punctate almost throughout; sixth ventral (♂) with a very much broader sinus than in *divergens*, broadly rounded, five times as wide as deep and three-fourths as wide as the segmental apex, the adjoining surface unmodified; hind tarsi slender, the basal joint as long as the next two combined. Length (♂) 6.2 mm.; width 1.15 mm. Utah (southwestern),—Weidt.

uteanus n. sp.

Some species of this group are exceedingly extended in geographic habitat, such as *mesomelinus*, which pervades the entire colder part of the northern hemisphere and *erythrogaster*, which is holonearctic, but many others are evidently local developments, among these being the rather numerous species of the *desertus* section in our Sonoran territories, distinguished by the extremely minute punctures of the abdomen among other characters. There has been some unaccountably erroneous synonymy suggested in the group,

and it does not seem possible to imagine, for instance, that authentic examples of *iracundus* and the European *fulgidus* Fabr., could even have been placed in juxtaposition with a view to careful comparisons, other than to note that they are of about the same size and are both black, with bright red elytra. In *fulgidus* the eyes are very much larger than in *iracundus* in both sexes and, in a female at hand from Morea, carefully identified by Reitter, they are distant from the nuchal constriction by about half of their own length only—in the male by less than half,—while in a typical male of *iracundus* they are separated therefrom by distinctly more than their entire length; the antennæ in the latter specimen are thick and incrassate, with the outer joints much wider than long, while in the *fulgidus* example cited, they are much longer, more filiform and with all the penultimate joints somewhat longer than wide; finally, the basal joint of the hind tarsi is relatively much more elongate in the European species. The supposed identity of these two species, which is reiterated also in the recent European catalogue of Heyden, Reitter and Weise, can therefore be demonstrated to be the result of hasty and careless investigation.

Raphirus Steph.

The European *fulvicollis* Steph. (*hyperboreus* Er.) is assumed above as the type of this group, as it seems to be one of its most widely distributed members. There are numerous species inscribed under *Raphirus* in the catalogues, but I am unable just now to give the essential differential characters, other than to state that, so far as the moderate number of American species are concerned, the body is always small in size, with the eyes very greatly developed as a rule, and the abdominal sculpture is frequently irregular, giving rise to paler or more silvery spots of pubescence in many cases. Our species are the following so far as known:

Scutellum smooth 2
Scutellum punctate 7
2—Eyes very large, extending to within a short distance of the nuchal constriction; front with a small, posteriorly angulate median impression 3
Eyes less developed, extending to within fully half their length of the constriction 6
3—Elytra with very few remote punctures arranged in about four series, the inner subsutural, the outer along the summit of the flanks and

below which the latter are finely, more closely and confusedly punctate; the inner of the other two series is generally of fine confused punctures, the outer more regular and of stronger punctures. Body slender, elongate-fusiform, deep black and highly polished throughout; head rounded, not quite so wide as the prothorax, the eyes anteriorly separated by only two-fifths more than their own width at that point; antennæ short, slender basally, moderately incrassate; prothorax orbicular, truncate at apex, as wide as long; elytra somewhat longer than wide and much longer than the prothorax, at base rather wider than the latter and at apex still much wider; abdomen finely, closely, evenly punctate, each segment with a rather indistinct oblique area of coarser paler hairs near each side basally; sixth ventral (♂) with a large triangular emargination at apex; hind tarsi very slender, the anterior moderately dilated in the male. Length (♂♀) 4.5–6.0 mm.; width 0.9–1.15 mm. California (Sonoma to Humboldt Co.). Very abundant. Vancouver—Horn. The elytra not æneous as stated of the Vancouver type. [*Quedius seriatus* Horn] ..... **seriatus** Horn

Elytra uniformly and more or less closely punctured throughout 4

4—Abdomen with a clearly defined rounded eye-like area of more pallid vestiture near each side, at the base of each dorsal segment. Body slender, very elongate-fusiform, polished and deep black, the elytra feebly ænescent, the legs and antennæ pale ochreo-testaceous; head rather small, rounded, the eyes at the middle separated by barely twice their width, slightly more in the female; antennæ rather short and slender, feebly incrassate, the outer joints nearly as long as wide; prothorax rather large, somewhat wider than long, widest near the base, the base and basal part of the sides strongly rounded, the sides anteriorly converging and nearly straight, much larger than the head, the serial punctures three; elytra equal in length to the prothorax, shorter than wide, at base as wide as the prothorax, at apex evidently wider; punctures fine but strong, very close-set; abdomen gradually strongly tapering from the base, very finely and extremely closely punctured throughout, the hairs laid differently on the eye-like spots; sixth ventral with a moderate, broadly rounded, shallow apical sinus; hind tarsi short, the anterior strongly dilated (♂), and less dilated though distinctly so (♀). Length (♂♀) 5.0–6.3 mm.; width 1.1–1.15 mm. California (Lake Tahoe) ..... **probus** n. sp.

Abdomen with a feebly defined irregular grouping of paler hairs at each side of the median line at the base of each dorsal segment 5

5—Body narrowly elongate-fusiform, shining, black, the elytra generally feebly picescent; legs and antennæ piceous to testaceous; head rounded, but little narrower than the prothorax, the very large prominent eyes more narrowly separated anteriorly, the antennæ rather slender, nearly as long as the head and prothorax, moderately incrassate distally; prothorax moderate in size, much rounded at base and basal parts of the sides, the latter moderately converging and straighter anteriorly; elytra somewhat longer than wide, longer and a little wider than the prothorax, the punctures strong and

rather well separated; abdomen tapering from the base, minutely, closely punctate, more closely toward the segmental bases, the basal part of the first three dorsal plates tumid along the median line, the surface beneath and sometimes above, more or less iridescent; sixth ventral (♂) with a rounded apical sinus about a third as wide as the apex and four times as wide as deep, the adjacent surface extremely briefly impressed. Length (♂ ♀) 4.2–5.7 mm.; width 0.85–1.1 mm. California (Sta. Clara to Siskiyou Co., and at Lake Tahoe). Vancouver Island—Horn. [*Quedius prostans* Horn]. . . . . **prostans** Horn

Body rather slender, somewhat more parallel than in the preceding, deep shining black in color, the legs and antennæ testaceo-piceous; head circular, the very large eyes not quite so prominent or thick as in *prostans*, though the inner lines similarly converge anteriorly, the intervening space broader; antennæ nearly similar; prothorax barely at all wider than the head, slightly elongate, parallel, the sides evenly and moderately rounded throughout the length, the base strongly rounded; series normal, the isolated discal puncture near the sides anteriorly very large; elytra scarcely as long as the prothorax, at base evidently, and at apex much, wider than the latter, the punctures fine and well separated, much less coarse than in *prostans;* abdomen nearly similar but with the tumidity along the median line on the basal part of the segments obsolescent on the first two plates and feeble on the third and fourth; hind tarsi shorter than in the female of *prostans*, especially joints 2–4. Length (♀) 5.5 mm.; width 1.1 mm. Colorado (Boulder Co.). . . . . **rupimontis** n. sp.

6—Form subparallel, rather convex, shining, red-brown, the legs and antennæ more or less concolorous, the latter uniform in color throughout; abdomen blackish, feebly iridescent; elytra paler at the humeri and along the apex, more broadly at the external angles, the head deep black, rounded and very convex, rather wider than long, the front unimpressed; eyes at slightly more than half their length from the base, not prominent but continuing the even curve of the sides; antennæ rather thick, extending nearly to the thoracic base, only feebly incrassate, the outer joints about as long as wide, the second barely shorter than the third; prothorax distinctly wider than the head, somewhat wider than long, strongly rounded at base and basal parts of the sides, the latter thence straighter and only feebly converging to the apex; tripunctate series distinct, even; elytra not quite as long as wide, as long as the prothorax, at apex fully as wide as the latter, at base somewhat narrower; punctures moderate in size and rather deep, strong and somewhat close; abdomen narrowing apically, the surface even, finely, rather closely and evenly punctate throughout; hind tarsi slender, the first and last joints equal in length, the anterior (♂) not very widely dilated, the last ventral of the same sex with a rounded sinus about four times as wide as deep, a third as wide as the apex, the adjacent surface triangularly and rather deeply impressed. Length (♂) 5.1 mm.; width 1.1 mm. Montana (Mullan),—Wickham. . . . . **orbiceps** n. sp.

Form rather slender, moderately convex, subparallel, similar in coloration to the preceding throughout; head less broad, more oval, fully as long

as wide, the eyes similar, at half their length from the constriction; antennæ nearly similar; prothorax almost as in *orbiceps* but much more conspicuously wider than the head, the sides rather more arcuate and continuing somewhat arcuate to the apex; elytra much shorter than wide, subparallel, exactly equal in width to the prothorax and distinctly shorter; punctures rather smaller and still closer than in *orbiceps* but asperulate and almost as conspicuous; abdomen with even surface, blackish, not iridescent, the segmental apices paler, the punctures fine, close and even throughout; tarsi nearly as in *orbiceps;* body narrower and more slender than in that species, the sixth ventral (♂) with the apical sinus much larger and deeper, fully half as wide as the segment, more narrowly rounded at the bottom and scarcely three times as wide as deep, the adjacent surface not definitely modified. Length (♂) 5.4 mm.; width 0.98 mm. A single example, without definite record of locality but probably from the northwest; I have no record of any kind concerning it. **solitarius** n. sp.

7—Body slender, subparallel, shining and piceous-black, the prothorax sometimes slightly paler, the elytra slightly rufescent; head slightly wider than long, the eyes very large and convex, their inner margins subparallel and not distinctly converging as they are in the *prostans* type; antennæ slender and feebly incrassate, pale flavate in color; prothorax distinctly wider than the head, subquadrate, fully as long as wide if not somewhat longer, the sides broadly arcuate; base rounded; posterior puncture of the triplex series at the middle of the length; elytra as long as the prothorax to a little shorter and exactly equal to the latter in width, subparallel, not as long as wide, the punctures fine and very close-set, the pubescence rather dense; abdomen only feebly tapering apically, finely, very closely punctate and pubescent, the surface even; sixth ventral (♂) with a moderate and rather shallow apical sinus, the adjoining surface feebly impressed. Length (♂) 4.8–5.25 mm.; width 0.85–0.95 mm. Maine to Lake Superior. Occurs also in Europe. [*Quedius hyperboreus* Er.] ..... **fulvicollis** Steph.

Body much stouter, more fusiform, rather convex, deep black, the elytra scarcely picescent; legs and antennæ piceo-rufous; head and antennæ as in the preceding; prothorax fully as wide as long, much wider than the head, rather more swollen basally than in the preceding, the sides and base rounded; posterior puncture of the series distinctly before the middle of the length; elytra much larger than in *fulvicollis*, distinctly longer than the prothorax and, apically, evidently wider than the latter, as long as wide, the punctures extremely minute and dense, the pubescence dense and dark, producing an opaculate appearance; scutellum with rather dense fine punctures throughout, except at base; abdomen broad, tapering apically, opaculate because of the very fine and extremely dense punctures and dense fuscous vestiture; tarsi rather short, slender, the anterior feebly dilated in the female. Length (♀) 5.4 mm.; width 1.2 mm. Washington State (Soda Springs) ..... **pugetanus** n. sp.

Seriatus Horn, is a very isolated species in elytral sculpture, but in the peculiar structure of the head, front and eyes, it is in complete harmony with *prostans* and others having close-set, even and normal elytral sculpture. We perceived the same inconstancy in elytral sculpture in the *Distichalius* group, showing that the peculiarly sculptured elytra of *Quedionuchus lævigatus* is not of itself a distinctive generic character and is of little or no value when considered apart from other structural features. *Fulvicollis* —under the name *hyperboreus*—is said by Horn to occur from Maine to Vancouver and northward, and this distribution is highly probable in view of its holarctic habitat, but the species named *pugetanus* above cannot be identical, or, apparently, even closely allied.

Quedius sublimbatus Mäkl., probably belongs to this group but is unknown to me; at first it seemed probable that it might be the species described above as *orbiceps*, the elytra having similar coloration, but they are there shorter than wide, while in *sublimbatus* they are, according to Horn, longer than wide.

Quediochrus n. gen.

The quadrate head and notably moderate though ample and unusually convex eyes, pallid coloration and more or less evidently explanate sides of the prothorax, impart a rather peculiar facies to the single species forming this generic or subgeneric group. It has been found in caves but probably only seeks such seclusion during the day, as there is no such extreme development of the erect tactile setæ, accompanying deficient eyesight, such as generally characterizes true cave dwellers. I have in my collection the two following forms:

Form stout, rather convex, shining, pale testaceous throughout in color; head large though much narrower than the prothorax, as long as wide, the eyes prominent, at about twice their length from the constriction in both sexes; tempora parallel and straight, rounding basally; foveæ, excepting the anterior, at a great distance from the eyes; antennæ rather long, thick but not distinctly incrassate, the outer joints not quite as long as wide, the second much shorter than the third; prothorax large, fully a fourth wider than long, continuously rounded at the base and sides, the latter more converging and straighter apically; surface broadly subdeplanate laterally, except at apex, the three punctures of the series fine and feeble, the scutellum very smooth; elytra quadrate, parallel, everywhere distinctly narrower than the prothorax, having small but strong and close-set

punctures; abdomen parallel, finely and very closely punctate; sixth ventral (♂) with a small shallow apical sinus, four or five times as wide as deep, the adjacent surface feebly impressed for a short distance; hind tarsi rather stout, the fifth joint slender. Length (♂ ♀) 9.0 mm.; width 1.8–1.85 mm. Indiana (Wyandotte Cave) and Colorado (Florissant),—Cockerell. [*Quedius spelæus* Horn].

spelæus Horn

A—Form still stouter, somewhat larger in size, similar in general characters, in color and lustre; head large, rather wider than long, the eyes convex and prominent at twice their length from the base in both sexes; tempora and dorsal foveæ as in *spelæus;* antennæ blackish, pale basally, thick but filiform, the joints all at least as long as wide; prothorax as in *spelæus* but less narrowed apically and with the lateral deplanate margin narrower and extending to the apical angles; elytra and abdomen similar in relative form and size but with the sculpture still finer and denser; sixth ventral (♂) with the apex sinuato-truncate, the median sinus being broad and with just visible curvature; tarsi nearly similar; female smaller than the male, and with notably smaller head. Length (♂ ♀) 8.5–10.0 mm.; width 1.9–2.1 mm. Manitoba (Aweme),—Criddle.

quadriceps n. subsp.

The head is much larger in the male of *quadriceps* than in that of *spelæus* and the sinus at the apex of the sixth ventral is rather broader and still very much more feeble, but I have noticed considerable variability in the degree of this sinus in some other species, and, in view of the general very great similarity of the two forms, do not care at present to give them more than varietal or subspecific relationship.*

Megaquedius n. gen.

If any of the groups formed above from the old supergenus *Quedius* has a value indisputably generic, it would appear that *explanatus* Lec., ought to have that status, along with such other very isolated divisional types as *lævigatus*, *ferox* and *vernix*. *Megaquedius*, unlike the last two just mentioned, is not monotypic, but includes several species, rather closely allied among themselves it is

* Mr. Fall has described (Can. Ent. 1912, p. 40) a *Quedius compransor*, which probably constitutes a special generic or subgeneric group in this vicinity. The characters which chiefly distinguish it from *Quediochrus*, are the coloration of the body, the head and prothorax being black, the posteriorly broadened form of the head, probably somewhat as in *explanatus* and, as in that species, small and not at all prominent eyes, and the broadly interrupted infra-lateral cephalic carina. The species is so exceptional, besides, in having no trace of the usual two discal series of two or three pronotal punctures, that I would propose for it the divisional name **Anastictodera** (n. gen.). *Compransor* lives in the burrows of the "pocket gopher" in Kansas.

true, but unmistakably different; they are, so far as represented in my collection, as follows:

Head and pronotum strongly alutaceous or opaculate.....2
Head and pronotum strongly shining, not alutaceous, except toward the sides of the pronotum.....3

2—Head strongly triangular, large, the diverging sides posteriorly nearly straight for a long distance. Male with the head very nearly as wide as the elytra, the surface punctulate; the foveæ are one near the eye and one obliquely remote from the eye posteriorly, the sides with rather strong scattered punctures; antennæ strongly fusiform, very thick medially; eyes oblique, feebly convex, subtruncate in front, at fully three times their length from the constriction; prothorax parallel at the sides and fully one-half wider than long, the surface declivously subexplanate at the sides, the tripunctate series distinct; scutellum with fine punctures and coarse black hairs; elytra quadrate, parallel, narrower than the prothorax, finely, very densely punctate and nigropubescent; abdomen four-fifths as wide as the elytra, nearly similar in sculpture and vestiture, the three or four basal tergites distinctly impressed basally, the sixth ventral with the small medial sinus about three times as wide as deep; anterior tarsi very broadly dilated basally, the posterior strongly tapering, thick basally; all the tarsi very hairy. Female smaller and less stout than the male, the head three-fourths as wide as the elytra, the eyes less oblique, at more than twice their length from the constriction; prothorax also smaller, less transverse, more anteriorly narrowed, the sides arcuate; elytra less conspicuously narrower than the prothorax; abdomen correspondingly narrower than the elytra; anterior tarsi strongly dilated. Length (♂) 19.0, (♀) 14.5–15.0 mm.; width (♂) 4.3, (♀) 3.4–3.6 mm. California (probably northern). . **laxatus** n. sp.

Head much less triangular, evidently shorter than wide, smaller in both sexes than in the preceding. Male moderately large, stout, rather convex, similar in color, lustre and sculpture to the preceding, but the tempora are much less diverging and are arcuate to the posterior inward curvature; eyes relatively larger, rather less oblique and at somewhat more than twice their own length from the constriction; foveæ: one near the upper margin of the eyes and one, discal, between the eyes and the base, with numerous small punctures on the flanks, the general surface similarly punctulate; prothorax one-half wider than long, the sides feebly converging anteriorly, arcuate, the base rounded; punctures as in *explanatus;* elytra and abdomen also nearly as in that species; sixth ventral with a nearly similar but shallower sinus, the tarsi nearly similar. Female smaller and narrower than the male, with still smaller though otherwise subsimilar head, the eyes at scarcely twice their length from the base; neck behind the constriction polished, as usual in the genus; prothorax smaller, two-fifths wider than long, more rounded at the sides, the elytra and abdomen as usual. Length (♂) 13.5–15.0, (♀) 11.7–13.5 mm.; width (♂) 3.5–3.6, (♀) 3.0–3.2 mm. California (Santa Clara to Sonoma Cos., and on Mt. Diablo; also at or near Colton—

Dunn; San Diego—LeConte, under the original description, and said to be found under stones). [*Quedius explanatus* Lec.]

explanatus Lec.

3—Female much larger and stouter than the same sex in either of the preceding species and with a larger head; form stout; color deep black throughout as usual; head strongly shining throughout, slightly shorter than wide, the eyes feebly convex, at much more than twice their length from the base, oblique, the sides behind them very feebly diverging, evenly and moderately arcuate, more so near the base; general punctulation rather close-set and very distinct, the punctures on the flanks small and well separated, those of the under surface small, sparse and setigerous; foveæ at each side nearly as in the preceding, the one at the base of the antennæ similarly small; antennæ a fourth longer than the head, fusiform; prothorax large, two-fifths wider than long, two-fifths wider than the head and evidently wider than the elytra, rounded at base and a little less so on the sides, the latter feebly converging anteriorly; surface subdeplanate laterally, the foveæ and small irregular marginal punctures as in *explanatus;* scutellum sparsely punctulate and pubescent; elytra not quite as long as wide, parallel, finely, very closely punctate and with dense short black hairs; abdomen slightly narrower than the elytra, with finer but less dense punctures and pubescence, the four basal tergites broadly concave basally, except toward the sides; tarsi nearly as in *explanatus.* Length (♀) 16.0 mm.; width 3.8 mm. Manitoba (Aweme),—Criddle.....**manitobensis** n. sp.

Large series of males in *laxatus* and *explanatus* would be very desirable, in order to determine the extent of variation in the size and proportions of the head and prothorax. At present it does not seem possible to conceive of any series which could unite these two species, for no such variations are at all well developed in any other of the Quedii known to me, such, for instance, as those characterizing the males of *Bryonomus canescens*, as shown by large series (Bull. Cal. Acad., I, p. 314), but at the same time the closely related *B. seminitens* has no such masculine variability. So it is possible that in the *Quedius explanatus* of LeConte, we may have an instance of extraordinary and very exceptional variation in the males, corresponding to that of *B. canescens*, but, as just said, this seems, according to our present lights, exceedingly improbable, for the reason that the variability would have to affect both sexes. The length of the original San Diego types, as given by LeConte, is 9.5–12.5 mm., and they were therefore probably females; the first measurement is so much smaller than that pertaining to any female known to me, that possibly the *explanatus* described above may be different from the true *explanatus.*

Tribe TANYGNATHINI

Tanygnathus Er.

In this singularly isolated genus the body is small in size, elongate-fusoid in form, rather convex and shining, the abdomen rapidly tapering. The head is small, the front of peculiar form, broad and transversely truncate at apex, flat antero-laterally, with the median part, at the sides of which the antennæ are inserted, convex and parabolic in outline, the labrum large, transverse, thin and submembranous, arcuato-truncate, with a small median sinus; the last joint of the maxillary palpi is long and extremely thin and aciculate, the antennæ rather long and slender. The anterior coxæ are extremely large and the tarsi are 5–4–4 jointed, the anterior short and rather thick, the two posterior long and slender, all rather hairy. Erichson and Horn both omitted to observe that the anterior tarsi are 5-jointed. We have two species as follows:

Body moderately slender, shining, rufo-piceous, the elytra blackish, with the suture and apex finely rufous, the prothorax testaceous, infumate slightly toward apex; head a little more than half as wide as the prothorax, the eyes small, rather convex and subbasal; antennæ very slender, slightly longer than the head and prothorax, blackish, the basal and outer two or three joints flavescent; prothorax nearly a third wider than long, rounded at base and on the sides, the latter gradually converging anteriorly; disk with a single puncture at each side of the median line just before the middle of the length; scutellum punctulate; elytra distinctly shorter than wide, together broadly and subangularly sinuate at apex, at base narrower, at apex fully as wide as, the prothorax; surface minutely, very densely punctulate and very finely pubescent, having each a line of three small setigerous foveæ at outer third; abdomen with longer and more conspicuous but much less dense pubescence, the segments finely and very densely punctured toward their bases, the apices sparsely punctulate and paler than the basal parts; sixth ventral (♀) narrow, subcircularly rounded at apex; legs pale brown; middle coxæ very large, flat, obliquely oval, extending virtually to the elytra, the hind coxæ small and contiguous. Length (♀) 2.7 mm.; width 0.68 mm. [*T. collaris* Horn nec Erich.] Florida (Sand Point),—Schwarz. . **bicolor** n. sp.

Body rather larger and stouter, the abdomen more acuminate, shining, dark rufo-piceous in color, the abdominal segments broadly paler toward their apices, the elytra nubilously and faintly paler apically and suturally, the prothorax testaceous but differing from the elytra far less in color than in *bicolor;* head slightly infumate, narrower than in the preceding, about half as wide as the prothorax; antennæ very slender, colored somewhat as in *bicolor*, the minute dense gray pubescence more evident, very finely filiform (♂) and extending to

the middle of the elytra, somewhat shorter and slightly incrassate (♀); prothorax a fourth wider than long, rounded at base, widest basally, the sides converging and feebly arcuate from the very broadly rounded angles to the apex; two discal punctures nearly as in *bicolor;* scutellum closely punctulate; elytra much shorter than wide, not quite as long as the prothorax, at apex fully as wide as the latter, at base much narrower, the sides diverging; punctures minute and only moderately dense, the decumbent hairs very fine, the surface much more shining than in *bicolor* but with a similar discal line of three punctures; abdomen acuminate, at base scarcely as wide as the elytral apex, sculptured somewhat as in *bicolor;* sixth ventral (♂) conical, the apex sinuato-truncate, the two apical stylets not very bristling and with two very slender intermediate processes, or (♀) narrow, elongate, with the apex circularly rounded, the two brushes of stiff black hairs distinct. Length (♂ ♀) 3.3–3.5 mm.; width 0.73–0.8 mm. Texas (Austin). Three examples.

acuminatus n. sp.

Dr. Sharp in the "Biologia," has given a method of subdividing the species of this genus into sections, based upon certain arrangement of bristles on the anterior femora of the male, but my material is so scanty that I have had no opportunity to test its general usefulness. In the male of *acuminatus*, the anterior femora are perfectly smooth on their lower face, excepting toward the lower margin, where there are small close-set subasperate pubiferous punctures, irregularly arranged. In what I hold to be the female, however, the lower edge of the anterior femora has, medially, a dense comb of short black contiguous and spinuliform setæ, the comb about half as long as the femur. It seems to me that this is the female and not the male, because the antennæ and apex of the sixth ventral, when compared with those specimens not possessing the femoral comb, are modified in exactly the direction of the usual feminine sexual signs in other Staphylinids, that is, the antennæ are shorter and more incrassate and the abdominal tip strongly rounded and not broadly sinuate as it is in those that do not have the comb. However, I have made no dissections and my belief is therefore based upon inference.

While allied to *collaris* Er., from Guyana, in South America, I am convinced that *bicolor*, described above, is different; it is smaller in size and the antennæ appear to be longer; the coloration of the elytra, also, is different, they being described as pallescent apically in *collaris;* in *bicolor* there is only a very fine abrupt apical and

sutural margin which is testaceous. The species throughout the genus resemble each other rather closely and it is very easy to overlook differences which may be of a specific nature.

Acylophorus Nordm.

In this genus the front of the head is nearly as in *Tanygnathus*, the apical margin being truncate and the median part rounded and abruptly elevated above the plane of the lateral angles and the antennæ are at the sides of the rounded part; it therefore belongs in all probability to the same tribal group of the Quediinæ. It is remarkable in that external indications of sex are almost completely wanting. The male is, however, slightly more slender than the female and the apex of the abdomen has two long anal styles, with an intermediate flat and obtusely acuminate pallid process, not often protruded; in the female this process is wanting, but between the two long anal styles there are two other styles almost as long though more slender. Species are particularly numerous in the warmer parts of North America, though the genus is widely diffused over the world.

A species was described by LeConte under the name *gilensis* but afterward suppressed. At various places about San Francisco Bay, I have taken a species which resembles *pronus* very closely in form, size and sculpture, but the elytra are less abbreviated and the abdomen bristles with longer, much closer and very conspicuous black hairs; these characters agree very well with what LeConte states regarding *gilensis* in very few words, and, as I also have the same species from St. George, Utah, taken by Wickham, I am thoroughly convinced that *gilensis* is a valid species and that it should be restored; it is abundantly distinct from *pronus*. The two following are also distinct from *pronus*, though the first is rather closely allied thereto:

Acylophorus longistylus n. sp.—Color, lustre and sculpture very nearly as in *pronus* but more slender in form, with more acuminate abdomen and much longer anal styles; legs testaceous, the anterior coxæ blackish externally, the posterior legs piceous; head similar but more narrowly oval, the neck not as wide, the antennæ slightly more slender but otherwise similar, except that the apex is more rapidly though less strongly thickened; prothorax as in *pronus* but relatively not quite so large; scutellum with few scattered punctures; elytra much less abbreviated and somewhat less coarsely punctured, slighly longer than the pro-

thorax; abdomen narrower and with rather finer punctures. Length (♂) 5.0 mm.; width 1.15 mm. Florida.

So far as discoverable, the lateral anal styles in the male of *pronus* are very short when compared with those of the female; in *longistylus* they are much longer in the male than in the female of *pronus*.

Acylophorus longicornis n. sp.—Stout, convex, polished, deep black, the elytral humeri faintly pallescent; legs pale flavo-testaceous, the posterior but slightly more obscure; head scarcely as long as wide, the eyes at their own length from the base, the sides behind them closely punctulate; two frontal punctures much more widely separated than in *pronus;* antennæ slender, very much longer, extending far upon the elytra, gradually clavate apically, black, with dense gray pubescence, pallescent at tip, the second joint only a little longer than the third; prothorax of the usual form but less narrowed apically, three-fourths wider than the head, only very slightly wider than long; scutellum large, with numerous close-set punctures, the margins smooth; elytra shorter than wide, not quite as long as the prothorax, punctured throughout as in *pronus* but rather less strongly or sparsely; abdomen sparsely but much more evenly punctate than in *pronus*, the anal styles rather short but with very aciculate apices. Length (♂) 6.5 mm.; width 1.55 mm. New York (Peekskill).

As no median process can be seen at the abdominal apex, and no duplication of the stylets as in the female, I conclude that the type is a male; it evidently belongs near *densus* Lec., but differs in its more shining and more sparsely and evenly punctured elytra, with pallescent humeri; the abdomen is similarly iridescent beneath but not above and the fifth tergite is pale apically; the mandibles are extremely close to the eyes as usual.

In this genus the claws of the anterior tarsi are very much longer than those of the intermediate or posterior tarsi, but I am unable to perceive that they differ in size sexually as stated by LeConte.

Subfamily STAPHYLININÆ.

Staphylinus Grav.

In the vicinity of *tomentosus* Grav., I find a number of rather distinct but hitherto uncharacterized forms, which have apparently a fully specific value, the four following being valid and well differentiated species beyond a doubt; the *tomentosus* group is one of the largest among the American representatives of the genus.

Staphylinus pinorum n. sp.—Smaller and rather more slender than *tomentosus* but with similarly shaped head; body, legs and antennæ

black, the anterior tarsi broadly dilated in both sexes and slightly rufescent; head but little broadened basally, the eyes at scarcely their own length from the base; surface with large but shallow, very close-set, umbilicate punctures; mandibles with the external groove coarse and deep; antennæ thick, filiform, a third longer than the head; prothorax distinctly wider than the head, parallel, circularly rounded at base, truncate at apex, the punctures similar to those of the head but about half as large, extremely close-set but very distinct, with mere vestiges of a fine median impunctate line; scutellum with rather short coarse pubescence, not velvety; elytra slightly shorter than wide, not quite as long as the prothorax and slightly wider, rather finely but strongly, densely punctate, the pubescence short and fusco-fulvous, like that of the rest of the anterior parts; abdomen obscure rufous at tip, rather finely, closely punctate and with longer and coarser hairs, the punctures sparse apically, the intermingled coarser foveæ evident apically; median velvety spots apparently completely obsolete; sixth ventral (♂) with a small and rather deep apical sinus, twice as wide as deep, the adjacent surface cylindrically impressed almost to the base. Length (♂♀) 12.0–12.5 mm.; width 2.6–2.8 mm. North Carolina (Southern Pines),—Manee. Two examples.

Differs very much from *tomentosus* in lacking the medial tomentose spots of the abdomen, in the more distinct punctuation of the anterior parts, non-velvety scutellum and in the much smaller and deeper apical sinus of the sixth ventral in the male, besides the smaller size of the body. The female is the smaller and narrower of the two specimens at hand.

Staphylinus fluviaticus n. sp.—Form nearly as in *tomentosus* but larger in size, black throughout, the rather dense pubescence rusty in tint, rather long and conspicuous on the legs, the rather broadly dilated anterior tarsi piceous; head barely longer than wide, scarcely dilated basally, the tempora long, feebly arcuate and nearly three-fourths longer than the eyes; punctures moderate in size, deep, very distinctly defined though extremely close-set; antennæ nearly a third longer than the head, thick, somewhat attenuate apically; prothorax only just visibly wider than the head, in form as in the preceding, the strong and very close-set punctures like those of the head but about half the size, more distinctly defined than in *tomentosus*, with a narrow impunctate line only toward base; scutellum velvety-black as in that species; elytra shorter than wide, not quite as long as the prothorax but distinctly wider, rather finely but strongly, densely punctate; abdomen finely, not densely punctate, having throughout a mixture of longer blackish and very short fulvous hairs and with two blackish velvety spots, separated by fulvous vestiture, at the segmental bases medially; under surface with moderate and rather well separated punctures. Length (♀) 16.7 mm.; width 4.0 mm. Missouri (St. Louis).

This species may be distinguished at once from *tomentosus*, as

represented by females of each, by its larger size, much more elongate tempora, the eyes being at scarcely more than their own length from the base in that species, more distinctly defined punctuation, more fulvous vestiture and much less distinct scattered shining foveolæ of the abdomen, longer, thicker legs and in having on the anterior face of the anterior femora, a very large oval concavity; in *tomentosus* this concavity is wanting, the corresponding space being simply smooth, glabrous and punctureless.

Staphylinus temporalis n. sp.—Body rather stouter than in *tomentosus* and with relatively less developed head and very much finer sculpture, black throughout, the legs feebly picescent distally; head distinctly inflated basally, not quite as long as wide, the eyes at one-half more than their own length from the base; punctures very moderate and, though close-set, separated by shining interspaces; antennæ thick, filiform, barely as long as the head; prothorax a fourth or fifth wider than the head, differing in outline from either of the preceding, not quite as long as wide, the circularly rounded posterior outline continuing at the sides fully to the middle, thence parallel to the apex, which is broadly lobed medially; punctures rather fine and close-set but with fine shining interspaces; a fine median impunctate line is traceable almost throughout and dilated near the base; scutellum somewhat velvety-black; elytra not quite as long as wide, fully as long as the prothorax and slightly wider, finely, closely punctulate and subgranulose; abdomen with fine and well separated punctures, gradually rather coarse toward the segmental bases, the pubescence fine, more or less sparser along the middle, even and unmixed with fulvous hairs, the velvety spots wholly wanting; scattered foveolæ indistinct; sixth ventral (♂) with a rather large and deep sinus, subtriangular in form and scarcely more than twice as wide as deep, the adjoining surface but very feebly impressed, the fifth very feebly, gradually sinuate medially. Length (♂ ♀) 13.5–14.0 mm.; width 3.2–3.5 mm. Florida (Jacksonville) and North Carolina (Southern Pines).

There is very little resemblance between this species and *tomentosus*, although it may be regarded as forming part of the same subdivision of the genus. In the female the foveolæ of the abdomen are more distinct than in the male and the anterior femora are as in *tomentosus*.

***Staphylinus fusiformis** n. sp.—Form rather stout, rather attenuated anteriorly, deep black throughout, the broadly dilated anterior tarsi not paler; pubescence rather close, obscure in color; head triangular, not as long as wide, rather prominently inflated at the sides basally, the eyes at their own length from the base; punctures coarse, rather deeply impressed, separated by narrow shining interspaces; antennæ thick, subfiliform, scarcely longer than the head, the last joint truncate, not as long as wide; prothorax much wider than the head, rather wider behind the middle than

at apex, somewhat elongate, circularly rounded in less than posterior half, the sides very feebly arcuate, the apex truncate, the nuchal lobe extremely feeble; punctures rather coarse, very close-set and impressed, not quite as large as those of the head, with a mere vestige of an impunctate line basally; scutellum densely velvety-black; elytra not quite as long as wide, as long as the prothorax and evidently wider, rather feebly, very densely punctate; abdomen with rather coarse and well separated punctures throughout, the hairs rather sparse; foveolæ wanting; each segment, basally, has two elongate velvety-black submedial spots, separated by an area which is shining, very finely punctulate and unevenly clothed with fulvous pubescence; under surface coarsely punctate; sixth ventral (♂) with a deep, sharply triangular apical notch, only one-half wider than deep, the adjacent surface conically impressed almost to the base of the segment; the fifth is feebly, circularly sinuate medially, with the adjacent surface broadly and very feebly impressed. Length (♂♀) 13.8–15.5 mm.; width 3.8–4.0 mm. Mexico (Durango City),—Wickham.

Similar in some respects to *modestus* Sharp, from Jalapa, but much smaller, with coarser and very much better defined punctuation of the head and pronotum, the velvety-black spots of the abdomen separated by an area of fulvous pubescence. *Neomexicanus* Bernh. (*modestus* || Fall) also belongs to this group but is smaller than any other species.

Philonthus Steph.

The following eight species belong to section A of Horn, having three discal punctures in each of the pronotal series and the anterior tarsi dilated in the male.

Philonthus wacoensis n. sp.—Form and general characters nearly as in *hepaticus* Er., shining, nearly black above, the elytra testaceous apically; head and abdomen black; legs testaceous, the antennæ fuscous, pale basally, distinctly incrassate, nearly as long as the head and prothorax, the outer joints as long as wide; head as wide as long, nearly as in *hepaticus* but with more broadly rounded basal angles; prothorax nearly as in that species but much shorter, slightly wider than long, similarly wider than the head and with the sides nearly straight and converging from near the base, which is broadly rounded, piceous-black in color; scutellum large, two-thirds as long as the elytral suture; elytra evidently not as long as wide, fully as long as the prothorax, at base fully as wide as the latter and at apex wider; punctures rather strong, moderately close and subasperate; abdomen tapering from the base, finely and very sparsely punctate; sixth ventral (♂) with a deep triangular notch at apex, the adjoining surface strongly and angularly impressed; tarsi slender, the anterior rather broadly dilated. Length (♂) 4.0 mm.; width 0.8 mm. Texas (Waco).

Related to *hepaticus* but differing in color, in the much more abbreviated prothorax, shorter elytra and very much sparser abdominal punctures.

Philonthus laxellus n. sp.—Form stouter than in the preceding, shining, the pronotum blackish-piceous, the elytra but slightly paler; head and abdomen black, the legs piceo-rufous; antennæ blackish throughout, the base of the second joint pale, longer than the head and prothorax, slender basally, gradually incrassate distally, the outer joints as long as wide; head narrow, longer than wide, the eyes at one-half more than their length from the base, the tempora distinctly converging and nearly straight behind them, becoming arcuate basally; prothorax as wide as long, in outline nearly as in *wacoensis*, distinctly wider than the head; elytra much shorter than wide, scarcely as long as the prothorax, at base slightly, at apex much, wider than the latter, the punctures small but strong, subasperate and close-set; abdomen broad, as wide as the elytra, parallel, narrowing only at apex, the punctures fine, sparse, becoming less sparse basally; sixth ventral (♂) with a small triangular sinus at tip, about twice as wide as deep, the adjacent surface not impressed distinctly; tarsi slender, the anterior only feebly though evidently dilated in the male. Length (♂) 4.2 mm.; width 0.92 mm. New Mexico (Cloudcroft),—Knaus.

This species differs distinctly from *wacoensis*, *inquietus* or *hepaticus* in its broad parallel abdomen, basally converging sides of the head, longer and more incrassate antennæ and many other characters.

Philonthus pumilio n. sp.—Very small, rather narrow and subparallel, shining, dark red-brown in color, the legs slightly paler, the head and abdomen black; head longer than wide, much narrower than the prothorax, the eyes at over one-half more than their own length from the base, the sides behind them slightly converging and nearly straight, becoming gradually arcuate posteriorly; antennæ long, extending to the middle of the elytra, infuscate, the basal joint piceo-rufous, very gradually and slightly thickened distally, the outer joints longer than wide; prothorax relatively large, longer than wide; sides gradually converging and slightly arcuate from the rounded base to the apex, the three punctures very widely separated, moderate; scutellum moderate, asperately punctate as usual; elytra shorter than wide, much shorter than the prothorax, at base as wide, at apex a little wider, than the latter; punctures moderate, strongly asperate and rather dense; abdomen broad, parallel, slightly narrowed only at apex, finely punctate, rather closely basally, sparsely apically; sixth ventral (♂) with a small angulate sinus about three times as wide as deep, the adjacent surface angularly and strongly impressed; anterior tarsi moderately dilated. Length (♂) 3.25–3.5 mm.; width 0.76 mm. Manitoba (Aweme),—Criddle.

Not closely related to any other species and one of the smallest true Philonthi known to me. The female is not at hand, but probably does not differ in any marked manner. Two examples.

Philonthus longiventris n. sp.—Elongate and rather slender, subfusiform, shining, black, the prothorax barely visibly picescent, the elytra with short gray hairs, sparser on the abdomen; legs rufo-piceous; head small, oval, longer than wide, much narrower than the prothorax; antennæ nearly black throughout, not at all paler at base, somewhat longer than the head and prothorax, the outer joints slightly longer than wide; prothorax longer than wide, somewhat as in *pumilio;* elytra shorter than wide, slightly shorter than the prothorax, at base slightly, at apex much, wider than the latter; surface opaculate, very even, the punctures rather close-set but small and not asperate; abdomen long, gradually attenuate behind the middle, finely, closely punctate; anterior tarsi very slightly dilated in the female. Length (♀) 4.8 mm.; width 0.76 mm. Montana (Mullan),—Wickham.

It seemed at first as though this might be the female of *pumilio*, but closer observation shows that such relationship is impossible, the size is larger, the antennæ quite different, but, especially, the elytra have a wholly different type of sculpture, the strong asperate punctures of that species being absent.

Philonthus lacustris n. sp.—Body small in size, subparallel, shining, very obscure reddish-brown, the head and abdomen black; legs flavotestaceous; antennæ heavy, gradually and strongly incrassate, extending almost to the middle of the elytra, blackish throughout, not paler at base, the outer joints slightly longer than wide; head small, slightly elongate, the eyes at three-fourths more than their own length from the base, the tempora moderately converging and nearly straight, becoming arcuate and more converging in nearly posterior half; prothorax as wide as long, much wider than the head, circularly rounded at base and on the sides basally, the sides thence strongly converging and nearly straight to the apex; three punctures fine, the posterior more distant; scutellum rather small; elytra well developed, shorter than wide and scarcely as long as the prothorax, at base equal in width to the latter, at apex broader, the combined apex rather strongly sinuate; punctures small, very close and asperulate; abdomen parallel, narrowed slightly only apically, the punctures fine, asperulate and rather close-set, the pubescence yellowish like that of the elytra but sparser; sixth ventral (♂) with a small subangulate sinus, two or three times as wide as deep, the adjacent surface deeply impressed in very acute triangle; anterior tarsi very moderately dilated. Length (♂) 4.5 mm.; width 0.9 mm. Minnesota (Duluth). Taken by the writer last summer.

While related to *pumilio*, this species differs in its slightly larger size, relatively smaller prothorax, larger elytra and much heavier, gradually more incrassate antennæ; the male sexual characters at the abdominal apex are almost similar.

Philonthus convergens n. sp.—Form moderately stout, more anteriorly attenuated, shining, paler red-brown in color, the head and ab-

domen black, the legs and elytral flanks flavo-testaceous; antennæ blackish, piceous at base, slightly longer than the head and prothorax, slender basally, gradually distinctly incrassate distally, the outer joints as long as wide; head small, elongate, as in the preceding but with the tempora more converging behind the eyes, the arcuate part much more basal; prothorax relatively smaller though distinctly wider than the head, as wide as long, in outline as in *lacustris*, the three punctures small, equidistant; elytra large though evidently shorter than wide, as long as the prothorax, at base distinctly, and at apex much, wider than the latter; punctures rather dense and strongly asperate; abdomen parallel, slightly narrowing only at apex, the punctures small, asperulate, close basally, gradually sparse posteriorly; sixth ventral (♂) as in *pumilio;* anterior tarsi very moderately dilated. Length (♂) 3.8 mm.; width 0.85 mm. Montana (Helena),—Wickham.

Closely resembles some other species of this group but distinguishable from *lacustris* by its relatively still smaller prothorax and more slender antennæ, and from *pumilio* by its narrower and more posteriorly narrowed head, very much smaller prothorax and larger elytra.

Philonthus lautus n. sp.—Rather stout and moderately large in size, shining, bright rufous, the head and abdomen black; legs piceous, the anterior coxæ and anterior and middle femora pale rufous; antennæ dull rufous, gradually black basally, one-half longer than the head, thick but subfiliform, the outer joints transverse; head rather large, quadrate, fully as wide as long, the basal angles very broadly rounded; eyes at one-half more than their own length from the base; prothorax evidently though not much wider than the head, as long as wide, the base rounded, widest behind the middle, where the sides are obtusely subangulate, thence straight and convergent to base and apex, feebly in the former, more strongly in the latter, sense; punctures small, not exactly in straight line; scutellum blackish, moderate in size; elytra subparallel, about as long as wide, fully as long and wide as the prothorax; punctures moderate, not asperate and decidedly sparse; abdomen shining like the elytra, parallel, rounding at apex, rather closely, not very finely punctate; tarsi slender, the anterior only slightly thickened basally in the female and not quite so much so as in the female of *basalis*. Length (♀) 8.7 mm.; width 1.6 mm. Wyoming (Cheyenne).

This species is more closely allied to *basalis* Horn, than to any other, but differs when compared with the female of *basalis*, in its much larger, more quadrate head, much thicker and more transverse outer antennal joints, larger prothorax, with subangulate sides, more sparsely punctured elytra, much more strongly and less closely punctured abdomen, longer legs and tarsi, larger size of the body and black and not red basal joint of the antennæ.

In the recent catalogue of the Schenkling series, Dr. Bernhauer has substituted the new name *duplicatus* Bernh., for *basalis* Horn, presumably because the latter name is preoccupied, but I am unable to find any older *basalis* in his list and therefore cannot understand the necessity for the change.

Philonthus scutellatus n. sp.—Elongate-fusiform, shining and deep black throughout, the legs piceous; antennæ blackish, not paler at base, not quite as long as the head and prothorax, rather slender, moderately incrassate, the outer joints slightly longer than wide; head oval, slightly elongate, the eyes large, not prominent, continuing the very even arcuation of the sides of the head and less than their own length from the base; prothorax somewhat longer than wide, much wider than the head, rounded at base, the sides distinctly converging and evenly, feebly arcuate from base to apex, the serial punctures strong; scutellum very large, from its extreme base to apex very nearly as long as the entire suture behind it; elytra slightly shorter than wide, equal in length to the prothorax, at base distinctly, at apex very much, wider than the latter; punctures small but asperulate and rather well separated, the general surface very shining; abdomen parallel, narrowing apically, with fine and very unequally distributed punctures, the hairs longer and rather darker than those of the elytra. Length (♀) 6.2 mm.; width 1.25 mm. California (Paraiso Hot Springs, Monterey Co.).

There are in the unique type, three punctures in the left and four in the right series on the pronotum, but I have every reason to believe that it belongs to the 3-punctate series; there is no species at all resembling it in the 4-punctate section; the anterior tarsi in the female type are decidedly thickened basally.

Philonthus atrolucens n. sp.—Form slender, strongly shining and deep black throughout, the elytra very faintly subæneous; legs piceous, the antennæ blackish, not paler basally, rather slender but not as long as the head and prothorax, distinctly incrassate, the outer joints not quite as long as wide; head oblong-oval, the eyes at two-thirds more than their own length from the base; sides parallel and evenly arcuate, rounding at base; prothorax elongate, wider than the head, rounded at base, the sides just visibly converging and feebly arcuate from base to apex, the apical angles rounded; three punctures moderately strong, equidistant; scutellum rather small, about half as long as the suture; elytra somewhat longer than wide, longer than the prothorax, the sides but faintly diverging, everywhere very much wider than the prothorax, the punctures small, not asperate and well separated, the surface shining; abdomen narrowing posteriorly but only slightly, the punctures fine, widely separated, closer basally, the hairs fine, a little longer and darker than those of the elytra. Length (♀) 5.4–5.5 mm.; width 1.1 mm. California (Gilroy Hot Springs, Sta. Clara Co.).

Not closely related to any other species. The anterior tarsi are

slender in the female types, so that the species probably would come under section D of Horn, if the male were known. It appears to me that this section D is superfluous in the treatment of Dr. Horn, and it would have been far better to distribute its species among the other sections, differentiating them in the tables by other characters than those of a purely sexual nature. The dilatation of the anterior tarsi in the male is of very variable degree, passing almost insensibly from the distinctly dilated to the undilated, though more or less thick, form characterizing the males of section D.

The following comes certainly under Section D of Horn and is one of the largest of the North American species of the genus; the fact that so prominent a species should have been overlooked hitherto, although occurring near New York City, is rather mystifying, but I am unable to identify it with any European species.

Philonthus validus n. sp.—Form (♂) very stout, shining, deep black, the elytra æneous; legs and antennæ deep black throughout; head large, transverse, parallel, with very broadly rounded basal angles, the eyes moderate; mandibles long and slender; palpi long, black, rufescent distally; antennæ geniculate, longer than the head, thick, incrassate, the outer joints short and strongly transverse, the last truncate, with an acute prolongation at one side; basal joint unusually long, longer than the next two, the third elongate, much longer than the second; prothorax not quite so wide as the head, a third wider than long, the sides parallel, broadly arcuate from above, oblique and straighter posteriorly when viewed obliquely, the base rounded; three punctures of the series rather coarse; scutellum moderate, black, very densely, asperately punctate; elytra distinctly shorter than wide, longer than the prothorax, at base fully as wide as the latter and at apex slightly wider; punctures rather strong, deep, subasperate, moderately separated and very conspicuous, the hairs fine, dark and rather close; abdomen not quite so wide as the elytra, parallel, with slightly arcuate sides, the punctures not coarse but strong and rather widely separated, much sparser than those of the elytra; sixth ventral with a narrow and very deep acute notch, twice as deep as wide, its edges beveled and translucent, the fifth segment with a broad cuspidiform emargination; surfaces not impressed; anterior tarsi rather thick but not dilated. Female like the male but not so large and less broad, the head much smaller, evidently narrower than the prothorax; sixth ventral rounded, the anterior tarsi nearly as in the male. Length (♂ ♀) 10.8–12.0 mm.; width 2.5–3.0 mm. New York (near the city and at "Cairo") and Pennsylvania (Harrisburg).

There is no other species within our faunal limits that can be compared closely with this; in general aspect it at first sight

resembles an unusually stout *æneus*, and in reality it should stand next to that species in the lists and be not separated by many unrelated species as is necessary in the arrangement of Dr. Horn; the anterior tarsi in the male of *æneus* itself are only very moderately dilated.

The following is so totally unlike any other species of *Philonthus* known to me, that I am in doubt as to its true affinities:

Philonthus nematocerus n. sp.—Moderately slender, rather convex, shining, dark piceous-brown in color, the head blacker; legs rufous, piceous distally; antennæ ochreous, blackish basally, extremely long and slender, not incrassate, extending to the basal parts of the elytra, all the joints very much elongated, the fifth and sixth two and one-half times as long as wide; head subquadrate, as wide as long, with numerous strong punctures on the lateral parts and, behind the eyes, three large foveæ in triangle, each bearing a long seta; eyes rather convex, between two and three times their length from the base, the tempora forming an even broad curve from near the eyes to the base; prothorax oval, a fourth longer than wide, scarcely as wide as the head, widest at apical two-fifths, the sides broadly rounded, slightly converging and straight basally, the base broadly arcuate, the angles widely rounded; surface very convex, smooth, the series having three discal punctures, which are very fine; scutellum finely, sparsely punctured, scarcely more than a third as long as the suture; elytra much longer than wide, much wider and longer than the prothorax, the sides feebly arcuate posteriorly; subsutural impressed lines broad and feeble; punctures fine and rather sparse, the hairs moderately long, well separated; abdomen arcuately tapering from near the base, finely, subasperately, evenly and rather sparsely punctate, the segments not transversely impressed basally; sixth ventral (♀) circularly rounded; anterior tarsi thick; legs very long and slender. Length (♀) 10.5–10.8 mm.; width 1.9 mm. British Columbia (Metlakatla),—Keen.

This species is not allied distinctly to any other of our Philonthi and, in fact, may prove to differ at least subgenerically; the tarsal claws are very long, arcuate and extremely slender.

The two following species belong to the section having four discal punctures in the pronotal series:

Philonthus molliculus n. sp.—Form rather stout posteriorly, narrow and attenuated anteriorly, polished throughout, pale red-brown in color, the head and abdomen slightly more obscure; legs pale; head convex, parallel, oval, slightly elongate, the sides evenly arcuate, rounding broadly at base; eyes small, slightly convex, at fully twice their length from the base; antennæ brown, not quite as long as the head and prothorax, rather stout and incrassate, the outer joints slightly shorter than wide, the third but very little longer than the second; prothorax subequal in width to the head, barely perceptibly wider, very elongate, subparallel, the sides

barely visibly converging from the strongly rounded base; serial punctures small, the anterior more distant; scutellum moderate, nearly smooth, having only very few minute and remote punctures; elytra relatively large, with sides strongly diverging from base to apex, not as long as wide, not quite as long as the prothorax, at base a fourth, at apex fully two-fifths, wider than the latter, the punctures fine but distinct and widely separated, the hairs sparse; abdomen broad, finely punctured, less sparsely than the elytra, the last dorsal plate almost impunctate. Length (♀) 3.5 mm.; width 0.75 mm. California (Truckee, 6000 ft. elevation).

Allied to *distans* Horn, but very much smaller and in fact one of the smallest of the true Philonthi, excepting *thermarum* and *nanellus* to be described below; it differs from *distans* also in the stouter antennæ, with more transverse outer joints, shorter elytra and other characters; the true *distans* is black and is a native of Vancouver Island; it is 5 mm. in length.

Philonthus cervicalis n. sp.—Elongate and subfusiform, shining, dark piceous throughout, the head black, the prothorax blackish, the elytra feebly pallescent, legs piceo-testaceous; antennæ dark brown, just visibly paler basally, rather slender, only feebly incrassulate, as long as the head and prothorax, the outer joints longer than wide; head of peculiar form, fully as long as wide, very evenly oval and widest behind the eyes, which are not prominent and rather large, at less than their own length from the constriction; neck exceptional in outline, obconical, the sides posteriorly from the constriction rapidly converging to the base; prothorax distinctly wider than long and wider than the head, the base and sides subequally and strongly arcuate only feebly narrowed anteriorly; basal angles obliterated; serial punctures strong, the three anterior close-set, the posterior remote; scutellum large, at one-half more than its own length from the end of the elytral suture, the elytra slightly transverse, longer than the prothorax, at base wider than the latter and at apex still slightly broader, the sides arcuate basally; punctures small but asperate, close-set and conspicuous, the interspaces shining; abdomen finely and closely punctate, the sixth plate very remotely so; sixth ventral (♂) with a subangulate sinus, a third as wide as the segment and about three times as wide as deep, the adjacent surface only very faintly impressed and smooth for a short distance; anterior tarsi moderately dilated. Length (♂) 6.5 mm.; width 1.3 mm. New York (Ithaca),—H. H. Smith.

This species is not closely related to any other and is peculiar in the form of the head, and especially that of the neck, the sides of the latter generally being parallel, as seen when the neck is exposed. It may be placed near *agilis* Grav., and allied species.

In the following six species the pronotal series have five discal punctures:

Philonthus flavibasis n. sp.—Form elongate, fusiform, shining, black or

slightly picescent, the elytra just visibly paler; legs rufo-piceous; antennæ blackish, the basal joint pale, the next two not so dark as the remainder, very long, extending to the middle of the elytra, moderately incrassate, all the joints elongated, the fifth and sixth about twice as long as wide, the third distinctly longer than the second; head rather longer than wide, oblong-oval, the eyes at one-half more than their own length from the base; prothorax large, longer than the head and nearly one-half wider, slightly elongate, the sides broadly arcuate and moderately converging from the strongly rounded base; punctures moderate; scutellum more than half as long as the suture; elytra shorter than wide, subparallel, not as long as the prothorax though slightly wider; punctures rather fine and close-set; abdomen rather finely but not closely punctate and gradually sparsely so behind; anterior tarsi (♂) very moderately dilated. Length (♂) 6.8 mm.; width 1.2 mm. Montana (Helena),—Wickham.

The sixth ventral of the male has a small and rather shallow sinus, with the surface adjoining triangularly impressed. This species may be placed near *lomatus* but is much more slender.

Philonthus cephalicus n. sp.—Form parallel and linear though not very slender, shining, testaceous, the abdomen dark, the segmental apices pale, the head almost deep black; antennæ ochreous-yellow throughout, short and thick, scarcely one-half longer than the head, rather strongly incrassate, the outer joints transverse; head large, oblong, rather longer than wide, the parallel sides feebly arcuate, rounding at base, the eyes very small, at nearly three times their length from the base; prothorax slightly elongate, parallel, circularly rounded at base, with straight sides, just visibly wider than the head, the punctures moderate; scutellum small; elytra distinctly shorter than wide, not as long as the prothorax, at base as wide as the latter, at apex slightly wider; punctures very coarse, shallowly impressed and moderately close-set; abdomen broad, parallel, very finely, rather sparsely punctate; sixth ventral obtusely rounded in the female. Length (♀) 5.3 mm.; width 1.0 mm. Manitoba (Aweme),—Criddle.

The anterior legs are completely torn away in my single example, but the species is so distinct, as shown above, that it could not fail to be recognized. It may be placed near *microphthalmus*.

Philonthus ottawensis n. sp.—Slender, shining, testaceous in color, the abdomen blackish, the segmental apices pallescent, the head black; antennæ fuscous, the basal joint testaceous, extending to the middle of the pronotum, rather thick, feebly incrassate, the outer joints not quite as long as wide; head elongate, the subparallel sides rounding strongly at base; eyes at twice their length from the base; neck four-sevenths the total width, parallel; prothorax evidently wider and longer than the head, elongate, subparallel, rounded at base, the sides very feebly arcuate, the apical angles well rounded; punctures rather fine; scutellum moderate, very acute; elytra shorter than wide, much shorter but everywhere much wider than the prothorax, slightly expanding from base to apex; punctures very coarse, deep, not asperate, separated by rather more than

their own diameters; abdomen gradually narrowing behind the middle, finely, rather sparsely punctulate; sixth ventral (♀) circularly rounded, the anterior tarsi slender. Length (♀) 5.6 mm.; width 0.83 mm. Canada (Ottawa),—W. H. Harrington.

Probably belongs to that part of the 5-punctate series having the tarsi undilated in the male; the species is remarkably distinct because of the relationships of the prothorax and elytra and also the very coarse punctures of the latter; it may be placed near *punctatellus*, but is much more slender and with smaller, still more coarsely punctured elytra.

Philonthus flumineus n. sp.—Elongate, somewhat attenuate anteriorly, shining, piceous-black throughout, the head deep black; legs testaceous; antennæ blackish, the last joint rufescent, the basal joint testaceous, longer than the head and prothorax, rather incrassate, all the joints longer than wide, the fifth and sixth one-half longer than wide; head oval, elongate, the eyes at one-half more than their length from the base, the tempora feebly converging and nearly straight, rapidly rounding inward basally; prothorax moderate, distinctly wider than the head but barely longer, somewhat longer than wide, strongly rounded at base and on the sides basally, the sides converging and straighter anteriorly; punctures moderate; scutellum half as long as the suture; elytra very nearly as long as wide, as long as the prothorax, at base distinctly wider than the latter, still wider at apex; subsutural impressed line distinct; punctures rather fine and moderately close-set; abdomen parallel, narrowing only very slightly at apex, finely, rather closely punctate, gradually sparsely posteriorly on segments four and five and very sparsely on the sixth, the sixth ventral (♀) circularly rounded at tip, the anterior tarsi slender. Length (♀) 6.4 mm.; width 1.1 mm. Missouri (St. Louis). Taken by the writer.

The long antennæ and very gradually diminishing width of the elytra, prothorax and head, will enable one to recognize this species, which may be placed near *clunalis*, but it is not closely related.

Philonthus linearis n. sp.—Parallel, linear, slender, convex and very compact, polished throughout and black, with the pronotum and elytra blackish-piceous; legs testaceous; antennæ thick, somewhat incrassate, rather longer than the head and prothorax, blackish, piceo-testaceous at base, the outer joints rather transverse; head oblong-oval, rather longer than wide, parallel and evenly arcuate at the sides, the basal angles broadly rounded; eyes not at all prominent, at fully twice their length from the base; prothorax oblong-elongate, parallel, just visibly wider than the head, the sides just visibly arcuate, the base rounded; punctures fine; scutellum rather small; elytra very nearly as long as wide, distinctly shorter than the prothorax, at base very slightly wider than the latter and at apex still a little wider, the sides straight; punctures fine and rather widely separated; abdomen finely, sparsely punctulate, polished; sixth ventral (♂) with the apex very peculiarly modified; there is a broad thin

hyaline and transparent apical part throughout the width, this hyaline membrane acutely and cuspidately incised at the middle; the chitinous part is broadly bilobed, with an acute median notch, the lines throughout subparallel to those of the limb of the hyaline membrane, the chitinous surface not at all impressed; anterior tarsi slender. Length (♂) 4.2–4.4 mm.; width 0.73 mm. British Columbia (Metlakatla),—Keen. Two examples.

Although very isolated in all its characters, this species may be placed near *microphthalmus* in the lists.

Philonthus nanellus n. sp.—Very small, rather stout, attenuate anteriorly, polished, piceous-black, the head and abdomen deep black, the legs flavo-testaceous; antennæ much longer than the head and prothorax, moderately incrassate, blackish, very gradually testaceous basally, the outer joints as long as wide; head oblong, slightly elongate, the eyes somewhat convex, at fully twice their length from the base, the long tempora feebly converging and nearly straight, rapidly rounding at base; prothorax slightly elongate, distinctly wider than the head, rounded at base, the sides thence distinctly converging and nearly straight to the apex, the apical angles obtuse and rounded; punctures rather coarse and deep; scutellum moderate; elytra as long as wide, distinctly longer than the prothorax, at base very slightly wider than the latter, at apex very much wider, the straight sides rather strongly diverging; punctures rather coarse, impressed, well separated, the pubescence short and sparse; abdomen slightly conical, finely, rather sparsely punctulate, flavate at tip; sixth ventral (♂) with a broad and gently rounded, very shallow apical sinus, adjacent to which the surface is angularly impressed, the impression about twice as wide as deep; it is so deeply impressed that the integument is thinned to the consistence of a hyaline membrane; anterior tarsi slender. Length (♂) 3.0 mm.; width 0.68 mm. Northern Illinois (Highland Park). Taken by the writer.

This species can also be placed near *microphthalmus*, but it is very much smaller in size, with broader and more conical prothorax and very different male sexual characters.

The following species is peculiar in having six discal punctures in each of the pronotal series as in *albionicus*, *instabilis* and *picicornis*, the series regular as usual:

Philonthus adustus n. sp.—Form very much elongated and slender, highly polished throughout and deep red-brown in color, the head and abdomen but little darker; legs piceo-rufous; antennæ dark brown, blackish basally, not quite as long as the head and prothorax, rather thick but barely incrassate, the outer joints as long as wide; head oval, elongate, feebly subinflated posteriorly though with broadly arcuate sides, the eyes small, at nearly three times their length from the base; neck half the total width; prothorax elongate, subparallel, evidently wider than the head, circularly rounded behind, somewhat wider anteriorly rather than pos-

teriorly, the serial punctures rather strong; scutellum moderate; elytra much shorter than the prothorax, at base distinctly wider than the latter and at apex still wider, not quite as long as wide; punctures rather coarse and widely separated, the ground polished; abdomen gradually, arcuately narrowing posteriorly, polished, finely and sparsely punctate; sixth ventral (♂) elongate and rather attenuate, the entire apex occupied by an emargination twice as wide as deep, which is exactly triangular, with perfectly straight sides and sharp angle, the edges with a very steep bevel, the upper edge of which is loosely fimbriate, the fifth segment not modified; anterior tarsi very slender. Length (♂) 7.0 mm.; width 1.2 mm. California (Sta. Cruz Mts. and at San Francisco).

There is no species with which this can be closely compared, the elytra being relatively shorter than in *albionicus* and the other species mentioned above; the surface has a peculiar varnish-like gloss throughout; the elytral punctures are decidedly coarse and the elytra are more rufous than the other parts.

The following seven species belong to Section E of Horn, the thoracic punctures being numerous and irregular; the body is generally of rather large size:

Philonthus morosus n. sp.—Stout, shining, black, the anterior parts ænescent, the elytra more strongly; legs nearly black; antennæ deep black throughout, stout, nearly as long as the head and prothorax, incrassate; outer joints slightly wider than long; head quadrate, with many coarse punctures, which become sparse or are wanting broadly at the middle; eyes very large, convex, at three-fifths their length from the base, the tempora short and strongly tumid laterally, being more prominent than the eyes; prothorax slightly wider than long and very little wider than the head, the parallel sides broadly and obtusely prominent at the middle, the base arcuate, the angles rounded but not obliterated; punctures moderate, evenly but sparsely distributed; a broad, clearly defined median line impunctate; elytra quadrate, slightly longer and wider than the prothorax, closely and moderately strongly punctate; abdomen parallel, rounding at apex, finely but strongly, evenly and not closely punctate; sixth ventral (♂) with a broad shallow cuspidiform sinus at tip, the adjacent surface not modified, the fifth segment normal; anterior tarsi moderately broadly dilated. Length (♂ ♀) 9.0–10.5 mm.; width 2.1–2.2 mm. California (Lake and San Francisco Cos.).

Related somewhat to *lecontei* but very distinct in its larger and more punctate head, with larger eyes and prominent tempora, more numerous thoracic punctures, in the very simple male sexual characters at the abdominal apex and in the much less broadly dilated anterior tarsi. The elytra sometimes become obscure rufous, with a large sutural blackish cloud basally, as is the case in most of the species of this particular group of Section E. I have

lecontei in my collection from California, New Mexico (Jemez Springs) and from northern Mexico.

Philonthus vulgatus n. sp.—Outline more fusiform, stout, black, shining, the elytra faintly bronzed; legs black or piceous-black; antennæ black, rather stout, almost as long as the head and prothorax, the outer joints rather longer than wide, the third very much longer than the second; head moderate, subquadrate, with larger and smaller punctures sparsely scattered laterally, the eyes convex, at three-fourths their length from the base, the tempora less prominent, parallel, then broadly rounding to the base; neck fully three-fifths as wide as the head; prothorax fully as long as wide to rather longer, distinctly wider than the head, rounded at base, the sides feebly converging and slightly arcuate from base to apex, the punctures rather strong, remotely scattered, more closely aggregated along the sides of a broad median impunctate line; scutellum moderate, elytra subquadrate or rather longer than wide, wider and longer than the prothorax, finely and moderately closely punctate; abdomen finely, rather sparsely, somewhat unevenly punctate; sixth ventral (♂) with a very small sinus, rounded, nearly three times as wide as deep, the adjacent surface scarcely at all modified; anterior tarsi moderately dilated. Length (♂♀) 8.0–9.5 mm.; width 2.0–2.1 mm. Canada (Ottawa), New York (Lake Champlain and Ithaca) and Minnesota (Duluth).

Distinguishable easily from *lecontei* by the very simple male sexual characters and still smaller head, and, from *morosus*, by the uninflated tempora; there are no examples with rufescent elytra among my material.

Philonthus pansatus n. sp.—Rather stout, subparallel, black, shining, the anterior parts faintly subæneous, the elytra rufescent, with black sutural cloud in the type; legs black, the tarsi piceous; antennæ black, rather thick, not quite so long as the head and prothorax, the penultimate joints slightly shorter than wide, 3–6 not as long as in *vulgatus;* head larger and longer, subquadrate, fully as long as wide, the sides parallel, rounding basally, the eyes moderately convex and at nearly their own length from the base; surface with many strong punctures laterally; prothorax fully as long as wide and slightly wider than the head, parallel, the sides feebly and unevenly arcuate, the base rounded; punctures fine and stronger intermingled, remotely and unevenly scattered, the broad median smooth line well defined by more seriate punctures; elytra quadrate, only slightly longer but rather distinctly wider than the prothorax, the punctures small but strong, even and rather close-set; abdomen finely, rather closely punctate throughout; sixth ventral (♂) with a rather large and obtusely cuspidiform apical emargination, about three times as wide as deep, the adjacent surface with a very small, feeble and indefinite impression at the apex of the sinus, the fifth segment simple; anterior tarsi strongly dilated but distinctly less so than in *lecontei*. Length (♂) 10.0 mm.; width 2.2 mm. Colorado (Boulder Co.).

This species is distinct from the preceding in its larger, more

elongate head, shorter antennæ, more parallel and larger prothorax, finer and much closer abdominal punctures, larger sinus of the sixth male ventral and more broadly inflated anterior tarsi.

The two following species are described from the female, but they are entirely different from any of the *lecontei* or *aurulentus* group in having numerous and close-set pronotal punctures and therefore belong to the *confertus* group:

Philonthus protervus n. sp.—Moderately slender, subparallel, shining, black, the anterior parts with æneous lustre, the elytra rufous, with large sutural blackish cloud in the type; legs dark rufous, the femora blackish; antennæ black, testaceous at base, not quite as long as the head and prothorax, moderately incrassate, the outer joints rather shorter than wide; head subquadrate, fully as long as wide, with many punctures laterally, the eyes not prominent, at slightly less than their own length from the base, the tempora almost evenly rounded from the eyes to the neck; prothorax rather wider than long, evidently wider than the head, the parallel sides subprominently arcuate at the middle; base rounded, the angles very obtuse but somewhat evident; punctures very numerous, separated by two to three times their diameters, the median impunctate line well defined; scutellum opaculate, finely, densely punctate; elytra not quite as long as wide, much longer and wider than the prothorax, the punctures moderate, rather close-set, strong and distinct; abdomen finely but very strongly, closely punctate, the raised basal margin of the three basal segments arcuately prominent at the middle, the pubescence subeven; anterior tarsi evidently but not strongly dilated. Length (♀) 9.6 mm.; width 1.8 mm. Northern Illinois.

Differs from *confertus* in its more parallel form, coarser and less approximate thoracic punctures, finer and more fuscous elytral and abdominal vestiture, which in *confertus* is pale golden-fulvous and very conspicuous, and in its much darker legs, the latter being very pale flavo-testaceous throughout in that species.

Philonthus finitimus n. sp.—Form and coloration throughout almost as in the preceding species; antennæ and legs almost similar in color, the former shorter, the seventh joint as long as wide, the tenth wider than long; head shorter, wider than long, the numerous punctures toward the sides very much finer, the eyes larger and more convex, at three-fourths their length from the base, the tempora fully as prominent, more rapidly rounding than in *protervus;* prothorax slightly longer than wide, only very little wider than the head, the subparallel sides feebly subprominent behind the middle and thence anteriorly feebly sinuate, the anterior angles much more sharply marked; punctures similar, well spaced; scutellum similar; elytra not so long, much shorter than wide, barely as long as the prothorax and much wider, slightly expanding from the base; punctures finer and very close, the hairs fine, short, close, fuscous and very inconspicuous; abdomen much more finely and closely punctate,

the transverse raised margins of the three basal tergites rectilinear at their hind margins, not at all prominent medially, anterior tarsi very thick and subdilated. Length (♀) 9.5 mm.; width 1.8 mm. Canada (Hull, Province of Quebec),—Beaulne.

The abdominal pubescence in both *protervus* and *finitimus* is shortened, coarser, fulvous and turned outward at the sides of the ventral tergites, producing a pseudomaculation, such as is seen in some Quediids; it is only feebly developed in *finitimus*, however, which differs from *protervus* in its shorter antennæ, finer cephalic punctures, more prominent eyes, longer prothorax, which is differently modified at the sides, finer elytral punctures and pubescence and finer, denser abdominal sculpture.

The two following species belong to the *quadrulus* group:

Philonthus gracilior n. sp.—Form slender, rather depressed, shining and deep black throughout, the legs piceous, the antennæ black or blackish throughout, longer than the head and prothorax, all the joints much elongated; head quadrate, parallel at the sides, rather abruptly, transversely rounded at base; surface densely and very coarsely punctured, with a broad median smooth space, which is nearly crossed by a transverse punctured area opposite the middle of the eyes, the latter only feebly convex and at a third more than their own length from the base; prothorax as wide as the head to narrower, slightly elongate, perceptibly narrowed behind, having, laterally, only very few moderate punctures but, toward the borders of the median impunctate line, coarser and more numerous punctures; scutellum with close deep punctures, without a smooth margin; elytra much elongated, very much longer and wider than the prothorax, depressed toward the suture, which is finely rufous, the punctures moderate but deep and rather close; abdomen strongly but not closely punctate; sixth ventral (♂) with a small subangulate apical sinus, the edge adjoining not modified; anterior tarsi rather feebly dilated. Length (♂ ♀) 6.0–7.5 mm.; width 1.2–1.25 mm. California (Anderson Valley, Mendocino Co.).

I obtained a moderate series of this species, which, when compared with a large series of *quadrulus*, obtained at Gilroy Hot Springs, Sta. Clara Co., and at Sta. Rosa, north of San Francisco, betrays numerous differences; in *quadrulus* the size is larger, the form stouter, the eyes smaller and more distant from the base, the elytra much shorter, only very slightly longer than wide and very much less conspicuously longer than the prothorax and the scutellum constantly has a narrow punctureless shining margin; finally the apical sinus of the male has a concave margin, in which the integument becomes very thin and subhyaline. These speci-

mens identified as *quadrulus* measure 6.3–8.5 mm. in length, while the length given by Dr. Horn is 6 mm., but they are probably identified correctly, although the author confused several species.

Philonthus sagax n. sp.—Form subparallel, long and rather slender, similar in coloration and lustre to the preceding, the antennæ almost similar; head broader, wider than long, the eyes very much more convex and prominent, at a fourth more than their length from the base, the tempora much less prominent, straight and converging behind them for some distance, then rapidly rounding, becoming subtransverse to the neck; punctures toward the sides much smaller and more widely separated, coarse and deep in the transverse area on the front anteriorly; prothorax slightly longer than wide, much narrower than the head, obliquely somewhat narrowed behind from near the middle; punctures nearly as in the preceding but laterally more numerous; elytra but very slightly longer than wide, distinctly wider and longer than the prothorax; punctures not coarse but deep and conspicuous, moderately close-set; abdomen as in the preceding, the basal tergites rather sharply impressed transversely at base; sixth ventral (♂) with a small and rather deep apical sinus, only the bottom of which is bordered narrowly by membranous integument; anterior tarsi rather feebly dilated, and similarly testaceous. Length (♂) 7.5 mm.; width 1.25 mm. Arizona (Nogales).

Distinguishable at once from *gracilior* by the shorter elytra, prominent eyes and converging tempora, among other differences; also by the smaller and sparser punctures toward the sides of the head, in which it agrees better with *quadrulus*.

Belonuchus Nordm.

This genus is related very closely to *Philonthus* but may be known by the short spiniform setæ along the lower edge of the anterior femora, the undilated anterior tarsi, longer mandibles, thick antennæ and by a certain habitus which is usually easy to recognize. Omitting the very well known *formosus* Grav., of the Atlantic regions and *ephippiatus* Say, which is Mexican, not occurring north of the boundary and allied to the larger *erythropterus*, there are in my cabinet the eight following species:

Upper surface black throughout, except the elytra, which are bright red. 2
Upper surface black, the elytra and abdomen rufous, the latter black at or toward apex 5
Upper surface testaceous throughout, the last two segments of the abdomen abruptly black 7
2—Abdominal punctures strong, very close-set and conspicuous above and beneath. Male with the head large, quadrate, the eyes not at all prominent, at nearly three times their own length from the base;

mandibles long, arcuate, straight basally; antennæ having the outer joints but slightly wider than long, the first about as long as the next three; surface with numerous large foveæ except medially, the median line impressed apically; prothorax much smaller than the head, wider than long, obtrapezoidal, with the basally converging sides broadly sinuate; serial punctures four, the posterior remote; scutellum black, coarsely, very closely punctate; elytra shorter than wide, equal in size to the head, the punctures fine and well separated; abdomen intense black throughout, very closely sculptured, not at all iridescent or scarcely even shining; legs piceous-black throughout; sixth ventral (♂) with a large subangular sinus, occupying the entire tip and fully four times as wide as deep. Female much smaller and narrower than the male, the head less developed, the prothorax as long as wide and the gular suture bifurcates at a point markedly more posterior than in the male, nearly as in the male of *moqu .us*. Length (♂ ♀) 8.0–13.0 mm.; width 1.35–2.4 mm. Arizona (Benson),—Dunn. Fourteen examples. . . . . **punctiventris** n. sp.

Abdominal punctures more or less sparse, the surface above and beneath more shining 3

3—Legs black throughout, the tarsi piceous. Male with the surface very shining, nowhere iridiscent or metallic; head nearly as in the preceding and broadly quadrate, but with the eyes more convex and the antennæ much shorter and thicker, the outer joints broader, very much wider than long; prothorax very much smaller than the head, nearly as long as wide, feebly obtrapezoidal but more convex and with less distinct apical angles than in *punctiventris*, the series each with three smaller and equidistant, widely separated punctures, the right series in the type with an adventitious additional puncture; converging sides basally nearly straight; scutellum with moderate and not very dense punctures; elytra nearly as long as wide, subquadrate and narrower than the head; punctures fine and rather sparse; abdomen with the sparse moderate punctures asperulate; sixth ventral (♂) truncate at tip. Length (♂) 11.0 mm.; width 2.2 mm. California (near Indio),—Dunn. . . . **laticeps** n. sp.

Legs castaneous-brown, the posterior pair blackish. 4

4—Body (♂) small in size, the upper surface polished black, nowhere iridescent or metallic, the elytra bright red; head moderate, quadrate, the eyes slightly convex, at twice their length from the base, the mandibles moderate, straight, curving slightly at apex; antennæ short, very thick, with the outer joints distinctly transverse, the first much shorter than the next three together; surface with a number of remote punctures laterally, the median line finely canaliculate except apically and in basal half; prothorax not distinctly narrower than the head, as long as wide, very feebly obtrapezoidal, the series with four punctures, the posterior remote; scutellum black, finely, closely punctate; elytra as long as wide, distinctly wider and longer than the prothorax, the punctures fine and rather close-set, with an uneven discal series of three or four setigerous punctures; abdomen polished, the sparse punctures asperulate, the two discal series at each side—formed by single subbasal foveæ on each tergite—more

conspicuous than usual; sixth ventral with an evenly rounded, gradually formed sinus, a third the total width and four or five times as wide as deep. Length (♂) 7.2 mm.; width 1.45 mm. California (San Diego),—Dunn.....**jacobianus** n. sp.

Body (♂) larger in size, the upper surface shining, black, nowhere metallic, the elytra bright red; head quadrate, wider than long, the eyes scarcely at all convex, at more than twice their length from the base; surface with the lateral punctures very coarse, moderately numerous; mandibles arcuate except basally; antennæ short, very thick, the outer joints transverse, the third much longer than the second; prothorax shorter and much narrower than the head, nearly as long as wide, the sides evenly, rather strongly arcuate and rather strongly converging from apex to base, the basal angles very broadly rounded; discal series of three moderate punctures not extending behind the middle of the disk, except in cases of an adventitious additional puncture; scutellum finely, extremely densely punctate; elytra subquadrate, much longer and wider than the prothorax, as wide as the head, the punctures rather strong but well separated; there are also a number of scattered foveolæ bearing erect setæ throughout the surface; abdomen with the punctures remote, closer basally and laterally on each tergite; sixth ventral feebly sinuato-truncate medially at apex. Length (♂) 7.9–9.5 mm.; width 1.6–1.9 mm. Texas (Brownsville),—Wickham.....**texanus** n. sp.

5—Gular sutures separating and diverging anteriorly from a point on the under surface of the head exactly midway between the base and the mentum. Body (♂) small in size, shining, the upper and under surfaces and legs throughout bright testaceous; head, pronotum and last two ventrals above and beneath black; head moderate, wider than long, the eyes convex, at only one-half more than their length from the base; mandibles straight, stout, arcuate and thin apically, the outer sulcus broad, its lower margin subprominent basally; antennæ stout, blackish, the outer joints transverse; discal punctures laterally moderate in size and remote; prothorax slightly longer than wide, a little narrower than the head, the sides feebly converging from the apical arcuation to the base and nearly straight, the base subcircular; series having five or six nearly equidistant and rather small punctures, extending far behind the middle; scutellum unusually short and with only a few small punctures; elytra quadrate, very much wider but not distinctly longer than the prothorax, the punctures small and sparse; scattered setæ not evident; abdomen finely, sparsely punctate; sixth ventral with a broadly and evenly rounded, gradually formed sinus, about a third the width and shallow. Length (♂) 7.0 mm.; width 1.55 mm. Arizona (locality and collector unknown).....**moquinus** Csy.

Gular suture bifurcating as usual only at the oral slope.....6

6—Coloration throughout above and beneath as in *moquinus*, the last two abdominal segments abruptly black; surface very shining; head (♂) transverse, the eyes barely convex and at scarcely less than twice their length from the base, the lateral punctures unevenly spaced and unequal in size, the anterior canaliculation distinct; mandibles as in

moquinus; antennæ longer, the outer joints but slightly wider than long; prothorax very feebly obtrapezoidal, as long as wide, much narrower than the head, the sides straight, arcuate at apex, the base circular; series of four punctures as in *moquinus;* scutellum of the usual large and acutely ogival form, rather strongly, densely punctate, impunctate at the margins and apex; elytra subquadrate, longer and much wider than the prothorax, wider than the head, the punctures rather small but strong and widely separated; abdomen finely, sparsely punctate, the sixth ventral nearly as in *moquinus.* Length (♂) 6.7 mm.; width 1.6 mm. Arizona (Prescott).

quadrifer n. sp.

Coloration throughout as in the two preceding species, except that on the upper surface the black apex of the abdomen is more gradually formed involving most of the fourth tergite, as well as those posterior; on the under surface, however, the black apex may involve the two or three last segments; shining, non-metallic; head (♂) deep black, subquadrate, almost as long as wide, the eyes at more than twice their length from the base, the punctures laterally very few in number, equally remote throughout; antennæ short, very thick, the outer joints transverse; mandibles almost evenly arcuate throughout; prothorax small, very much shorter and narrower than the head, as long as wide, obtrapezoidal, the sides evenly and rather strongly arcuate; series of three punctures short and anterior; surface almost black, the periphery more or less pallescent; scutellum obscure rufous, rather finely, closely punctate; elytra subquadrate, much longer and wider than the prothorax, the punctures fine and sparse; abdomen finely, sparsely, subasperately punctate; sixth ventral (♂) with a broad, shallow and obtusely cuspidiform apical sinus. Female very much smaller than the male, with less developed head but nearly similar otherwise. Length (♂ ♀) 7.0–10.2 mm.; width 1.3–1.75 mm. Arizona (Benson—Dunn and Sta. Rita Mts.—Wickham). Ten specimens. . . . . **arizonicus** n. sp.

7—Body slender, rather small in size, very shining; head (♂) transversely quadrate, the lateral punctures few in number and remote, strong; anterior canaliculation short, broad and deep, the mandibles long, straight, gradually arcuate and finely aciculate apically; eyes slightly convex, at more than twice their length from the base; antennæ slender basally, not very thick apically, rather long and blackish, picescent basally, the last joint paler, the outer joints but slightly wider than long; gular suture single throughout; prothorax subquadrate, nearly as long as wide, much narrower than the head but about as long, the sides feebly converging from apex to base and nearly straight; punctures all coarse, the series of five to seven rather close-set; scutellum densely punctate, with narrow impunctate margins; elytra with small, strong and widely separated punctures and some scattered setæ; abdomen strongly punctate, closely so basally and remotely apically on each segment; sixth ventral with a small, rounded and rather deep sinus, not twice as wide as deep. Female like the male but with the head narrower, not distinctly wider than the prothorax, the mandibles shorter, the antennæ much shorter and

thicker, the sixth ventral rounded at apex. Length (♂ ♀) 6.8–9.0 mm.; width 1.1–1.4 mm. Florida (Palm Beach and New River). Ten examples..... .....**pallidus** n. sp.

In my original description of *moquinus* (Cont. Descr. and Syst. Col. N. A., II, p. 125), occupying more than a page of rather fine type, I omitted three of the most important characters of the species: the form of the gular suture, the form and sparse sculpture of the scutellum and the completely testaceous legs. The female of the two original specimens did not belong with the male type, which, I am now convinced, was not taken by Morrison. The species was hurried into synonymy by Horn without justification, as it is one of the more isolated species of the genus, but this Hornian synonymy was copied by Bernhauer in his recent catalogue in the Schenkling series. *Xanthomelas* Solsky, with which it was united in synonymy, is said by Dr. Sharp to be a *Philonthus** and to have longer spines on the lower edge of the anterior male femora beyond the middle; there is no species described above having any such character and I do not think that either *xanthomelas* or *ephippiatus* Say, occur north of the Mexican boundary. The latter species is said by Say to have the tergum "a little hairy"—and therefore probably rather sparsely punctured—"deep blackish-blue" and "iridescent," which characters will not at all fit *punctiventris*, which figured under that name in my collection for many years. *Pollens* Sharp, which in later years was added to the American list, is said by the author to be red, with the head, prothorax, antennæ, scutellum, prosternum, last two abdominal segments and four anterior coxæ black, being colored almost as in *formosus* but 11 to 14 mm. long; I have seen no such species. Many of the species of *Belonuchus* resemble each other to external view rather closely and they all vary greatly in the size of the body, but I feel rather sure that all the species described above are distinguished by fully adequate characters of a structural nature; coloration when constant is as valid a structural character as any other.

* I think that a considerable number of species placed in *Philonthus* by Dr. Sharp, are more properly *Belonuchus*, at any rate agreeing much better with the latter in its peculiar habitus.

NOTE

Mr. J. F. Hausen (Can. Rec. Sci., 1891, p. 321) described a species of *Philonthus* under the name *stictus*. The source of publication is inaccessible to most of our coleopterists and I therefore append the following description, drawn from the characters given by the author:

Philonthus stictus Hausen—Rather stout, subdepressed, moderately shining, piceous-black, the antennæ and legs concolorous; head subtruncate at base, a little longer than wide, parallel behind the eyes, the hind angles rounded, punctured and pubescent, a median area impunctate; antennæ rather stout, attaining the base of the prothorax; joint one as long as two and three together, 4–7 subequal, the remainder obconic and somewhat longer than wide, the last obliquely acuminate at tip; prothorax slightly wider than the head, convex, longer than wide, the base rounded, the sides slightly arcuate, anteriorly convergent, the apical angles right; surface closely, evenly punctate and puberulent, with a smooth median line, the seta at the sides before the middle long; elytra somewhat inflated behind, longer [and according to the figure much wider] than the prothorax, slightly convex, closely and not very finely punctate, pubescent, the sutural stria conspicuous; abdomen strongly margined, slightly iridescent, pubescent, more notably so at the sides, the fourth and fifth dorsals piceous at apex, the posterior segments gradually increasing in length; hind tarsi with the first joint as long as the next three combined. Length 7.9 mm. A single specimen (♀ ?) from Lachine, near Montreal.

The author states that it probably belongs to the *confertus* group but differs distinctly in color from that species. The species described in the present paper coming nearest to *stictus*, are *finitimus* and *protervus;* the former has the antennæ shorter, the outer joints shorter than wide and the elytra much more abbreviated, being, along the suture, much shorter than the prothorax; in *protervus* the elytra are large and longer, but the prothorax is not longer than wide and the antennæ are slender, though with the outer joints not longer than wide and more strongly obconic; the entire form of the body is apparently more slender and parallel in both.

Aurulentus Horn, does not occur east of the Rocky Mountains; though having tumid tempora, it is easily distinguished from *morosus* by the pellucid impressed margin of the last male ventral.